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# The Dental Digest

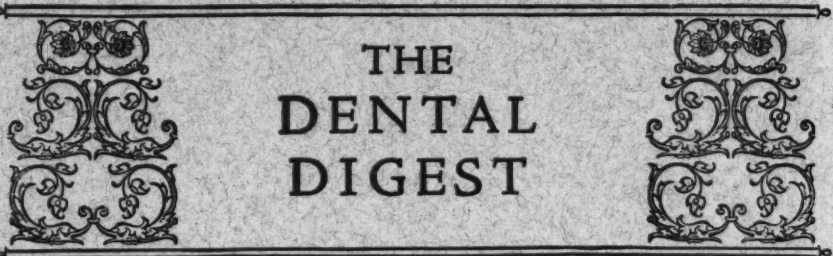
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**THE DENTAL DIGEST**  
GEORGE WOOD CLAPP, D.D.S., EDITOR  
ALLAN M. JOHNSON, A.B., D.M.D., ASSOCIATE EDITOR  
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# THE DENTAL DIGEST

VOLUME XXXVI

NOVEMBER, 1930

NUMBER 11

## Alveolectomy

By M. HILLEL FELDMAN, D.D.S., New York, N. Y.

Chief of Dental Department, Lincoln Hospital; Instructor, General Anesthesia, Allied Dental Council, New York; Author of Textbook, *A Manual of Exodontia*

It is not the function of this paper to dwell upon the virtues of the operation of alveolectomy and its significance in dental practice. I feel certain that the progressive practitioner recognizes

earliest possible moment. In presenting these photographs I do so with a feeling that they may give some emphasis to conditions which sometimes trouble the general practitioner.



Fig. 1

Showing protrusion of the maxillary teeth.

its value in assisting the tissues to heal early and with a minimization of pain as well as in permitting the patient to receive an artificial substitute at the

Fig. 1 shows protrusion of the maxillary teeth. The mandible also was protruded, but this does not show so clearly in the photograph.

Fig. 2 is a lateral view of the protrusion. Lest one get the idea that the teeth alone were responsible for the condition, the reader is referred to Fig. 3. This is a photograph of plaster models of the mouth mounted in occlusion. It is readily seen here that the extraction of these teeth would have

completed case, with the patient's lips closed normally, whereas in Fig. 1 the patient cannot bring the lips together except by some forcible means.

#### TECHNIC

The technic for performing this operation of alveolectomy is as follows:



Fig. 2

Lateral view of the same case as in Fig. 1.

failed to correct the marked forward lift of the patient's upper lip.

Fig. 4 shows the models of the mouth mounted in occlusion, made following the operation of alveolectomy.

Fig. 5 is a photograph of the com-

An incision is made through the mucoperiosteum down to the bone, the line of incision extending from the crest of the ridge toward the mucobuccal fold at an oblique angle. An incision is made at each of the lateral boun-



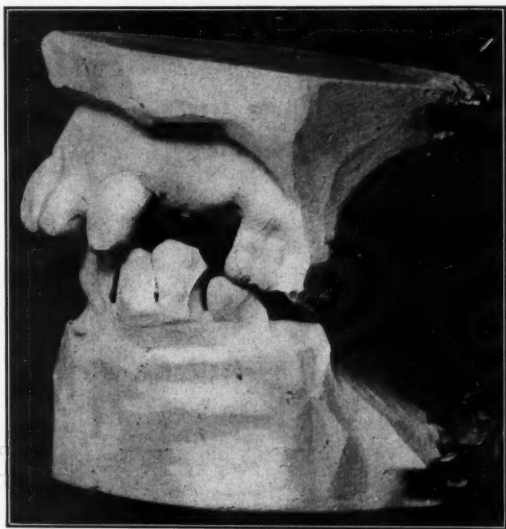


Fig. 3



Fig. 4

Figs. 3-4

Models of the same case as in Fig. 1—before the operation.



Fig. 5

View of the same patient as in Figs. 1-4—after the operation.

daries of the area of operation. An incision is then made along the median line of the ridge connecting the two lateral incisions.

The next step is to reflect the mucoperiosteum labially or buccally and then to insert the periosteal elevator at the ridge line of incision to reflect the mucoperiosteum from the palatal aspect. On the labial side the mucoperiosteum should be reflected at least as far as the mucobuccal fold, in order that a clear open view may be had of the entire area of operation, and also to afford the operator the opportunity to prepare the bone with the least chance of leaving behind a sharp angle. It is not necessary to reflect the palatal

mucoperiosteum very much. Probably two to three millimeters or possibly an eighth of an inch is sufficient.

With the soft tissues held back properly, the operator then proceeds to remove the bone with a rongeur, keeping before him a mental picture of the contour which he desires to obtain at the completion of the operation. Perhaps no better suggestion could be made for the practitioner than to mount his plaster models and carve in the plaster the desired contour, preliminary to the surgery. In this way he is more apt to prepare for himself a conservative check against a too radical surgery.

It is impossible to lay down any set

rule as to the amount of bone which is to be removed in a particular case. General principles only must prevail in a discussion of this problem, but the operator must decide for himself in each particular case the extent of bone removal which the particular mouth demands. Personally it is my opinion

of the bone. Bone files are sometimes of value, but in my hands I have been able to get along very well with a minimum indication for their use. But that is a matter of individual choice. It is important, however, to bear in mind that the outline of the bone, when the operation is complete, must present no

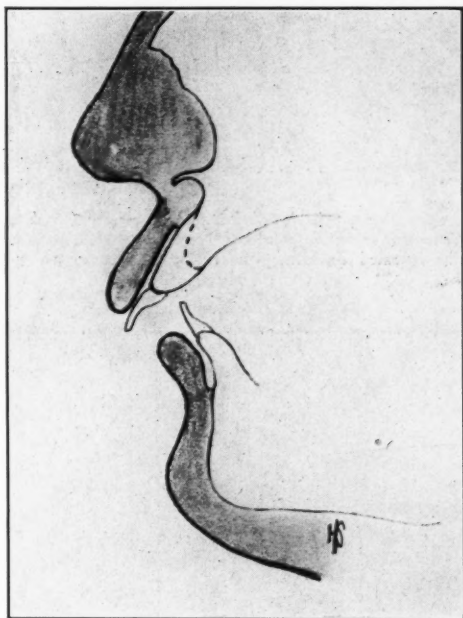


Fig. 6

Diagrammatic representation of the photographs in Figs. 1 and 2 with dotted line indicating the point to which the protruding bone was removed from the maxilla by alvelectomy in the correction of the deformity.

that the best work can be done with a rongeur for the rough trimming of the bone, both buccally and palatally, and with a small round mounted stone, such as is used in the preparation of cavities in teeth for the reception of fillings, for the final smooth finishing

angularities, but rather a rounded surface with no undercuts. It is also important to bear in mind that there must be no spiny ridge margins at those points where the prosthetic appliance is to bear on the tissue with stress.

When all the intended bone has been

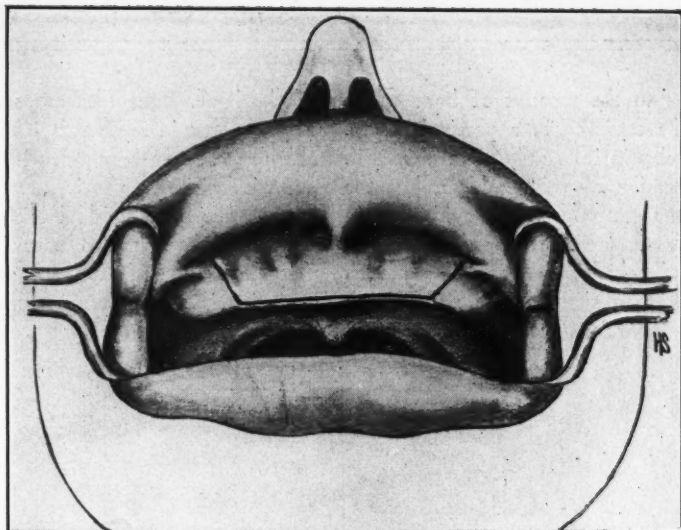


Fig. 7

Diagrammatic representation of the lines of incision necessary for the proper reflection of the mucoperiosteum in this operation of alveolectomy. Note the angular incisions at the lateral boundaries of the area to be operated connecting the horizontal incision along the crest of the ridge.

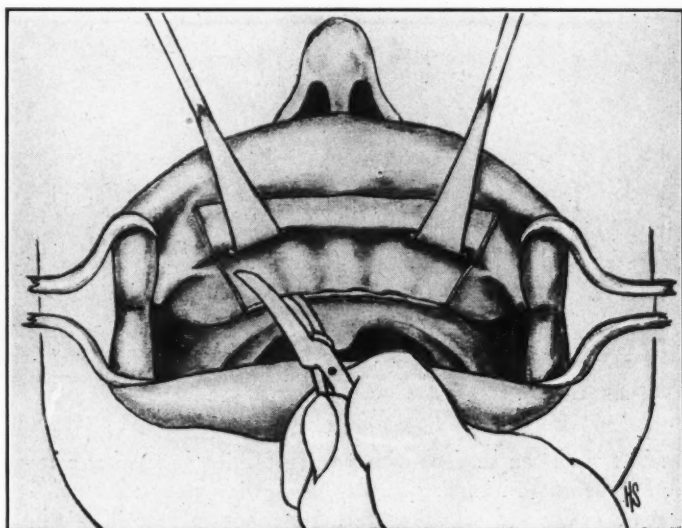


Fig. 8

Diagrammatic representation of the technic of using the beaks of the rongeur for the removal of the buccal plate by inserting one beak within the alveolus and one beak outside the alveolus buccally to remove the bone thus engaged. This is the first step in the removal of bone in this operation.



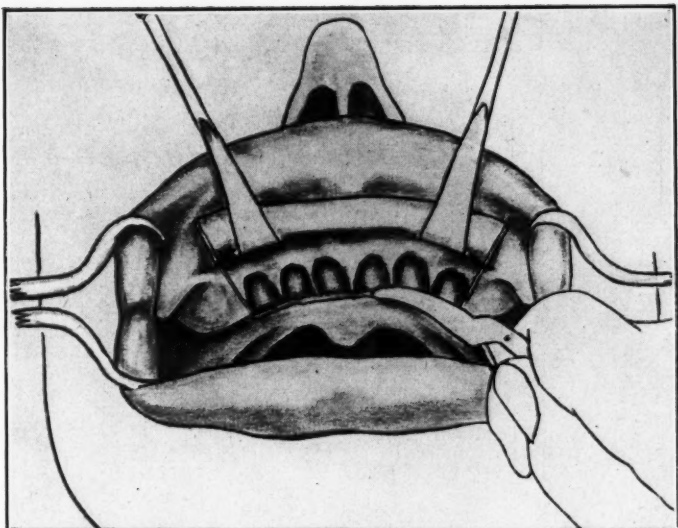


Fig. 9

Diagrammatic representation of the technic for the use of the rongeur beaks along the ridge for the removal of the bone from the palatal aspect, as described in the text.

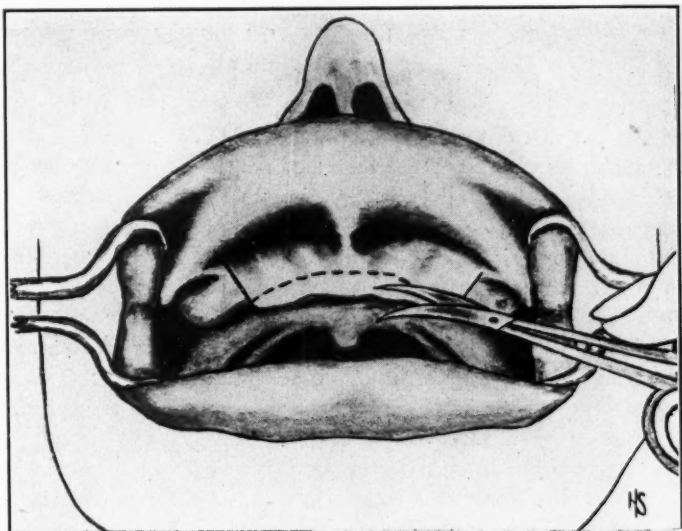


Fig. 10

Diagrammatic representation of the area as it appears following the return of the reflected mucoperiosteal flap to position. The dotted line represents the line of the new ridge. With curved shears the superfluous soft tissue is removed so that in coaptation of the palatal and the labial mucoperiosteal flaps there will be no unwanted tissue remaining to result in a loose, flabby ridge. The soft tissue is removed from the palatal as well as the labial flaps.

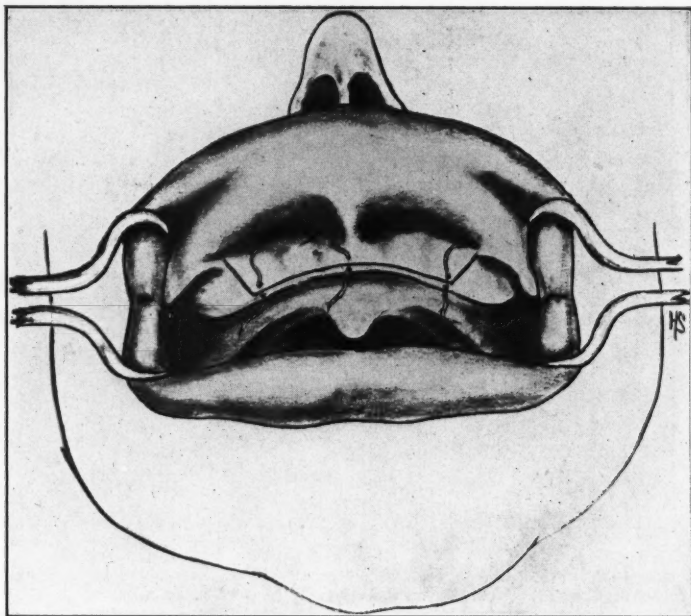


Fig. 11

Diagrammatic representation of the final coaptation of the labial and the palatal flaps by sutures. The first suture to be applied is the central one connecting the labial frenum to the palatal mucosa.

removed and the area of operation has been thoroughly sponged with normal saline solution, and the spicula of bone have been cleaned out thoroughly, the soft tissues are approximated. This is done so that the operator may judge how much tissue to remove along the line of incision at the ridge, from both the buccal and the palatal flaps, in order to prevent a soft flabby ridge when the tissues have healed. It must be borne in mind that the soft tissues must be trimmed wherever bone has been removed; otherwise the superfluous mucosa may remain to cause the prosthodontist considerable annoyance later. Here again it is impossible to lay down any definite rule as to how much soft

tissue to remove. The operator should hold the two flaps against the bone and trim the tissue accordingly.

The approximation of the tissue is then made definite by the introduction of sutures joining the buccal and the palatal mucoperiosteum. No bone should be left exposed. Wherever there is an exposure of alveolar tissue, additional suture must be applied.

Fig. 12 shows a lateral view of another patient who recently presented for operation for a similar condition. The protrusion is manifestly disfiguring. The mandibular incisors in occlusion rested against the palate one-quarter of an inch behind the maxillary centrals.

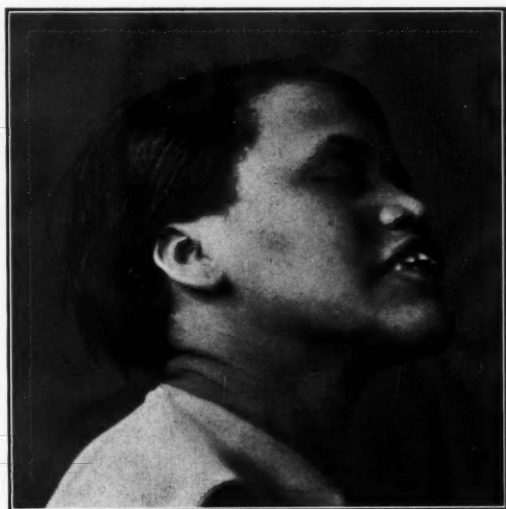


Fig. 12

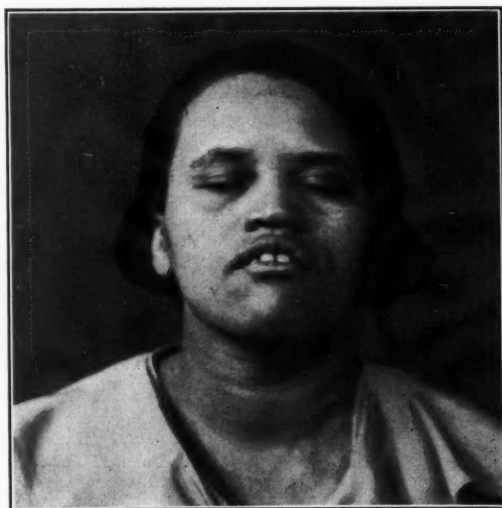


Fig. 13

Figs. 12, 13, 14  
Views of a patient before the operation.

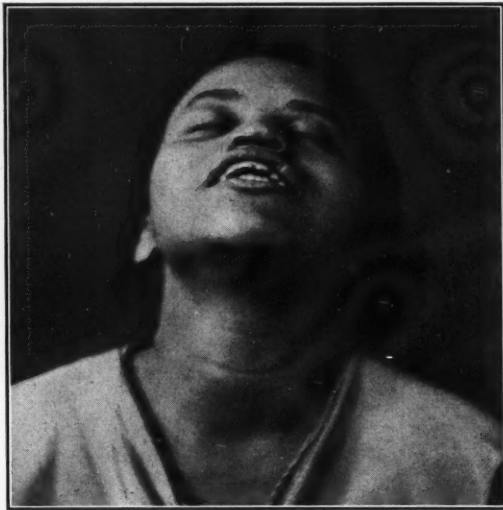


Fig. 14

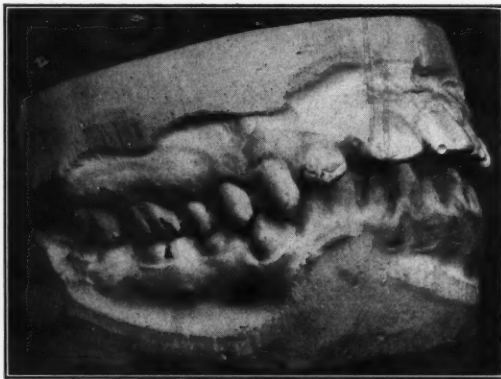


Fig. 15

Model of the same case as in Figs. 12-14—before the operation.





Fig. 16



Fig. 17

Figs. 16-17

Views of the same patient as in Figs. 12-15—after the operation.

Fig. 13 is a view of the same patient as in Fig. 12 with the teeth in occlusion and the lips closed as far as she could bring them together.

Fig. 14 is another view of the same patient showing the marked overbite of the central and lateral incisors and the bony investment around these teeth.

Fig. 15 shows the models of the mouth before the operation.

Fig. 16 is a view of the same patient following the operation, and Fig. 17 is a lateral view of the same case.

730 Fifth Avenue



[JAW FRACTURES]

*Fractures of the mandible or the maxilla require special treatment by reason of the fact that such fractures usually interfere with the proper occlusion of the teeth. The mere reduction and splinting of a broken jaw does not constitute a successful case. If the occlusion is not returned to what was normal for that particular mouth before the break, the treatment cannot be said to have been complete.*

—KINCAID.

## Clinical Laboratory Methods In Dentistry

By NATHANIEL FREEMAN, D.D.S., New York, N. Y.  
Adjunct Dentist, Mount Sinai Hospital and Montefiore Hospital

### II

#### THE BLOOD

There is perhaps no truer index of vitality than that revealed by the study of the blood; for example, an individual whose blood-clotting time is increased bespeaks danger in the event of large surgical undertakings. The total bulk of the blood is from 1/13 to 1/11 of the body weight, therefore it is advisable that the intake of fluid for every twenty-four hours be sufficient to maintain at the maximum the power to carry to the tissues what they need and take away from the tissues what they do not need. A full supply of oxygen depends first upon deep breathing, to enable the red cells to receive and absorb it, and the movement of cell bodies in the blood depends upon a full supply of blood plasma.

The following tests are of extreme value, and, even if they are not done by the individual dentist, their significance at least should be thoroughly understood.

*Hemoglobin.* Where the mucous membranes of the mouth or the reflected eyelids appear to be pale, this test is indicated. The patient's finger is cleansed with a little alcohol and allowed to dry. A sharp sterile needle, preferably spear-pointed, known as a Hagedorn should be used, as it produces a good drop of blood that usually suffices for all the tests. An ordinary sterile hypodermic needle also can be used. After the drop of blood is obtained, it is absorbed by a piece of

special blotting-paper. This is then compared with the standard guide, and the percentage of hemoglobin is noted. For this purpose we recommend a Tallquist hemoglobinometer.

*Coagulation time.* As routine procedure it is often advisable to question the patient as to the time it usually takes for his blood to clot. Where any history of previous trouble has occurred, especially if the patient is of the male sex, it is advisable to test the coagulation time. One must not forget that there may be female bleeders, but of course these are not true hemophiliacs. In purpura hemorrhagica and certain forms of anemia the blood coagulation may be delayed.

The test is a very simple one. All one needs is a very fine capillary pipette, which can be made very easily by drawing glass tubing over a Bunsen flame. The finger is cleansed with a little alcohol, and a puncture is made as described above. One end of the capillary tube is touched to the drop so obtained and the blood immediately rises by capillary attraction. The tube is then placed on a table in a horizontal position, and the time is noted. At the expiration of about five minutes the tube is taken between the fingers, and a piece is broken off very gently. If the blood has coagulated, the fibrin which has formed will cause the broken ends to adhere. On the other hand, if the blood has not sufficiently coagulated, the ends will break clean. At minute intervals we continually break

off other pieces until the blood shows definite coagulation. The normal maximum time is nine minutes. This is quite an accurate test and varies from the more elaborate methods by a fraction of a minute. We cannot over-emphasize how so simple a test can save a practitioner hours of mental distress and also serious consequences to a patient.

**Bleeding time.** This is the time required for the bleeding to stop when a puncture is made. There is a simple test for this also, and all that one needs is blotting-paper. This is applied to the drop of blood, the tip being carefully touched, and then another area is applied until no more blood oozes forth from the puncture. Normally bleeding stops in three minutes. This test is especially valuable in cases of purpura and certain other blood diseases, where the coagulation time may be normal but, due to a lack of blood platelets, the bleeding time is increased.

A total count of both the red and white cells per cubic centimeter of blood also is often indicated. Such a test should be made by a competent pathologist. However, it is advisable that a dentist should familiarize himself with the findings so elicited. The total red blood cell count is normally four to five million per cubic centimeter, being slightly higher in the male.

**Anemia.** Anemia, in general, means a diminished quantity of blood or of red blood cells in the vessels of the whole or any part of the body except in mild chlorosis (a mild form of anemia marked by a greenish color of the skin). In severe anemias there are alterations in the red blood cells giving rise to the following forms: *microcytes*,

*poikilocytes*, *megalocytes*, *nucleated red blood cells*, *normoblasts*, *neutrophils*, etc.

The total white blood cell count determines the presence of infection.

**Leukocytosis.** This may be regarded as the effort of the blood-producing organs to protect the body against micro-organisms and circulating toxins. It is a definite finding in all inflammatory or suppurative diseases, unless they are very slight or have been walled off.

A pathological decrease, or *leukopenia*, is usually seen in pernicious anemia, tuberculosis, typhoid, etc.

A *differential blood count* also is of importance in questions of diagnosis. This count is made from the stained smear of blood in order to determine the percentages of the various forms of white blood cells.

A drop of blood is obtained from the finger as before, and a clean glass slide is touched to it. Two good-sized drops are placed upon the slide and then another glass slide is used to smear these drops over the entire length. This is best done by holding the end of one slide in the drops of blood at an angle of about 45° and then pushing it away from the edge, the object being to make a broad, thin smear. This is then stained with one of the blood stains, such as Wright's or Jenner's. The dyes are classified as acid, basic or neutral, and the cells are designated in accordance with the persistency with which they hold the stain. The white blood cells are differentiated as follows:

Normal  
Percentage

Polymorphonuclear leukocytes . . 60 to 72%



Lymphocytes (small and large)	22 to 35%
Large mononuclears	8 to 10%
Transitional leukocytes	2 to 4%
Eosinophiles	2 to 4%
Basophiles	0.5 to 1%

Where a case presents with a swelling and there is a question of fluctuation, a white blood count and a differential blood count will definitely establish the decision. We have often seen these swellings opened into indiscriminately and no resultant pus obtained. Periostitis or even osteomyelitis may occur from such operative procedures.

#### GENERAL DISEASES OF THE BLOOD

Some of the general diseases involving the blood and blood-forming organs are the following:

*Chlorosis.* A disease of the blood seen in women only and attended with a diminution in the hemoglobin and usually in the number of red blood cells.

*Secondary anemia.* A disease of the blood caused by poor food, bad air, prolonged suppuration, mycotic endocarditis, diseases of the stomach and intestines, malaria, syphilis, malignant tumors, chronic poisoning due to lead and sometimes arsenic.

*Pernicious anemia.* A disease of the blood and blood-forming organs characterized by excessive destruction associated with defective production of red cells. The anemia is entirely disproportionate to any apparent cause and, when once established, tends to progress to a fatal issue. The essential lesion is an extreme and progressive diminution in the number and a very great variation in size and form of the red blood cells.

*Leukemia.* A disease in which the

characteristic changes are alterations in the relative proportions of the blood. There are four types:

(1) *Acute lymphatic leukemia.* A disease resembling clinically an acute infection, with rapidly increasing anemia, enlargement of lymph nodes and a moderate increase in size of the spleen and liver. The red blood cells diminish rapidly in number. Normoblasts and occasionally megaloblasts are present. The chief forms are lymphocytes.

(2) *Chronic lymphatic leukemia.*

(3) *Acute myelogenous leukemia.*

(4) *Chronic myelogenous leukemia.*

*Blood platelets.* The number of blood platelets varies from 200,000 to 350,000. These are increased in many anemias, both primary and secondary, and especially in carcinoma. In pneumonia, septic processes and leukemia there is also an increased number of platelets. A diminution of the platelets is noted chiefly in cases of purpura and pernicious anemia.

*Acidosis.* This denotes an increased acidity in the blood. In certain diseases such as diabetes mellitus, because of imperfect combustion of the carbohydrates in our food due to insufficient insulin (the hormone of the pancreas), acid bodies like acetones, diacetic acid and betaoxybutyric acid, collect in the blood, increasing to such a degree that coma and death result. Even in conditions where no diabetes exists, acidosis develops because the food which is consumed contains too much acid end-products after it is thoroughly burnt up in the body. If we eat a high acid-ash diet (meat, fish, cereal, bread, oils and fat), the blood, in order to maintain the proper reaction of hydrogen

ion concentration, draws alkalis from the fixed tissues. In the acute infectious diseases of childhood, because of the increased metabolism resulting from the fever and the consequent undernourishment, acidosis develops. Very

often the teeth show parallel rows of depressions of dark discoloration due to defects in the enamel acquired during these fevers.

5 East 57th Street

(To be continued)



[POSTOPERATIVE PAIN]

*The principal reason for surgical interference in the mouth is the presence of pathologic conditions; and in order to eliminate these conditions, it is necessary to produce a certain amount of trauma to the tissues, which is unavoidable, and which in itself produces post-operative discomfort, the amount depending on the severity of the operation.*

—MILLER.

## Preventive Dentistry As an Aid In Scientific Health Service\*

By GEORGE WOOD CLAPP, D.D.S., New York, N. Y.

Preventive dentistry, in the sense in which the term is used here, seeks to raise the physiological threshold high enough so that diseases of the mouth and teeth will not occur or, if they have occurred, may be successfully treated. The object is to enable patients to retain full complements of sound teeth in healthy mouths, with only moderate amounts of office care and at small expense.

The purpose of this paper is to summarize three lines of investigation and effort now being conducted by dentists to bring this desirable condition to pass and to show their relation to the practice of medicine. The first is an effort to establish in the mouths of experimental animals conditions like those found in many human mouths; the second is to repair the defects usually found in teeth immediately after their eruption; the third is to perfect methods that will keep the teeth and mouth clean and healthy.

### A NOTABLE DENTAL INSTITUTION

In 1915 there was opened in Boston an institution of which dentists are justly proud, the Forsyth Dental Infirmary, endowed to render dental service to children too poor to pay for it. More than 34,000 such children are treated annually.

Even with so great a capacity it soon became apparent that there were more

poor children in the city than this institution and all the similar institutions likely to be established could serve, and that merely cleaning and filling teeth would not locate the cause of such appallingly prevalent caries or correct it when found. The directors therefore enlarged the plan of operation and, while continuing to render dental services, devoted serious attention to the search for the cause of susceptibility to caries and methods of increasing resistance to it.

Obviously, the first thing to be done was to examine the children who suffered from extensive caries. With the aid of members of the medical profession a plan for the physical examination of each child accepted for treatment was put into operation. It was found that 75% of the children especially susceptible to dental caries had spinal curvature, and that large percentages of these children had eye or ear or throat or nose disease. Some had endocrin imbalance. Harold DeWitt Cross, then Director of the Infirmary, was forced to conclude that oral and dental diseases are deficiency diseases.

Much knowledge about deficiency diseases has been gained in experimental laboratories, but minute attention has rarely been paid to the effect of the deficiencies on the oral tissues, including the teeth. In the thought that knowledge might be gained, a Department of Experimental Research was established under Percy R. Howe, who was also Professor of Dental Science

\*Read before the Harris County Medical Society, Houston, Texas, March 16, 1927.

in Harvard University. Perhaps we shall understand better the details of some of his experiments if we summarize the results of nearly forty years of intensive application by Howe. All of the classical experiments to induce decay of extracted human teeth by continued immersion in fermenting saliva have been carefully repeated with negative results. Many efforts have been made to induce caries in the teeth of experimental animals, especially guinea-pigs and monkeys, by maintaining active fermentation in their mouths for long periods; if the diet was normal, the efforts were unsuccessful. Efforts to induce caries by the feeding and injection of the micro-organisms usually most active in dental caries were unsuccessful if the animal received the necessary quantity of well-balanced ration.

On the other hand, a deficiency of Vitamin C in the diet which was good in all other respects led to conditions in the mouths of monkeys which are strikingly like the conditions in many human mouths: retardation of development, difficulty in shedding the deciduous teeth, destruction of the bony and soft tissues surrounding the teeth, and decay of the teeth themselves. Many of the studies associated with these experiments have been conducted jointly by Howe and S. Burton Wolbach, M.D., Professor of Pathology at Harvard University. They are now engaged on studies which are likely to set the medical world agape. Howe is careful to state that he does not regard the results of the experiments as conclusive.

#### DEFICIENCIES AND THE TEETH OF GUINEA-PIGS

There are objections to drawing any conclusions for human teeth from experiments on the teeth of guinea-pigs, which grow continuously, while human teeth do not. But very suggestive things may be learned.

If, from a large number of guinea-pigs on a satisfactory normal diet, a group is separated and fed upon the same diet with the exception that all Vitamin C is removed, apparently nothing will happen for about fourteen days. About the fifteenth day it may be expected that they will all develop the characteristic joint symptoms of scurvy. But long before that important things have been happening to the teeth, and by the fourteenth day they are far advanced. Let us look at a microphotograph of a normal pulp in a guinea-pig's incisor, just below the gum line (Fig. 1).<sup>\*</sup> Two things should be noted: (1) that the pulp completely fills the root, and (2) that the odontoblasts are arranged side by side nearly parallel to each other.

The next picture (Fig. 2) shows a section of a similar tooth, in the same location, made by the same workers and the same technic, at the end of seven days of Vitamin-C-free diet. The pulp has shrunk away from the root, the odontoblastic processes have been pulled out of the dentinal tubules, the odontoblasts are deranged and the space between the pulp and dentin is filled with a fluid which cannot calcify. At the end of fourteen days of

<sup>\*</sup>Figs. 1-10 are used through the courtesy of Percy R. Howe, A.B., D.D.S., D.Sc.



Fig. 1

Section of incisor root of normal guinea-pig just below the gum line. The odontoblasts are in orderly arrangement and in contact with the dentin all around.



Fig. 2

Section of incisor root of guinea-pig just below the gum line after seven days on Vitamin-C-free diet. The pulp has shrunk, and there is some clear fluid between the pulp and the dentin.



Vitamin-C-free diet the pulp is more shrunk, the odontoblasts are more deranged and the fluid is greater in quantity, all of which is shown in Fig. 3. An additional process is observed. The dentin of the root has begun to liquefy on the side toward the pulp, and, if this diet-deficiency is long

go back to its former size and shape, but within twenty-four hours of the first feeding of orange juice it will begin to impart to the fluid between itself and the dentin of the root the power to calcify into secondary dentin, which may be called *dental scar tissue*, and this calcification will extend

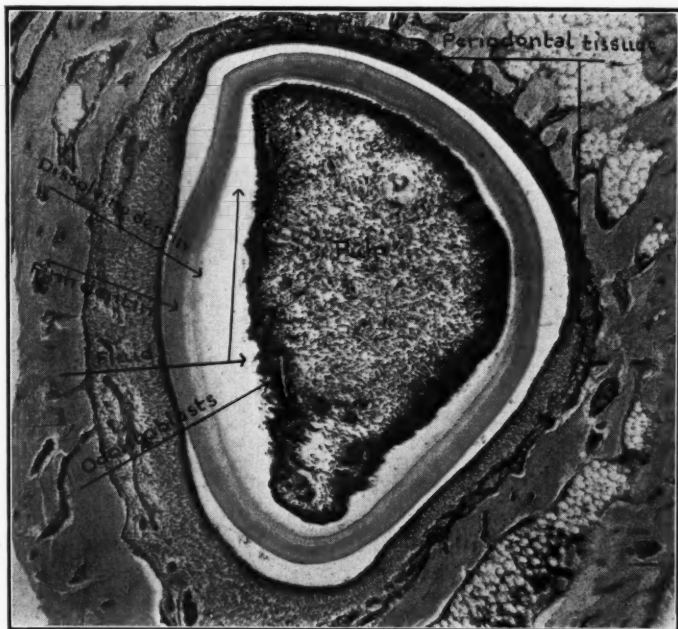


Fig. 3

Section of incisor root of guinea-pig just below the gum line after fourteen days on Vitamin-C-free diet. There is fluid in the space between the pulp and the dentin, and the dentin has begun to be resorbed. The pulp is incapable of further function on this diet.

enough continued, it may be completely destroyed.

If at the end of fourteen days of Vitamin-C-free diet from 10 to 20 c.c. of orange juice are added to the diet, the destructive processes are immediately arrested in the pulp and reparative processes begin. The pulp cannot

progressively outward from the pulp toward the dentin in a manner possible only in the presence of a fluid. It will eventually reach the original dentin, as may be seen in Fig. 4.

Our illustrations present ample evidence that these pulps were not shrunk by the method of preparing the sec-

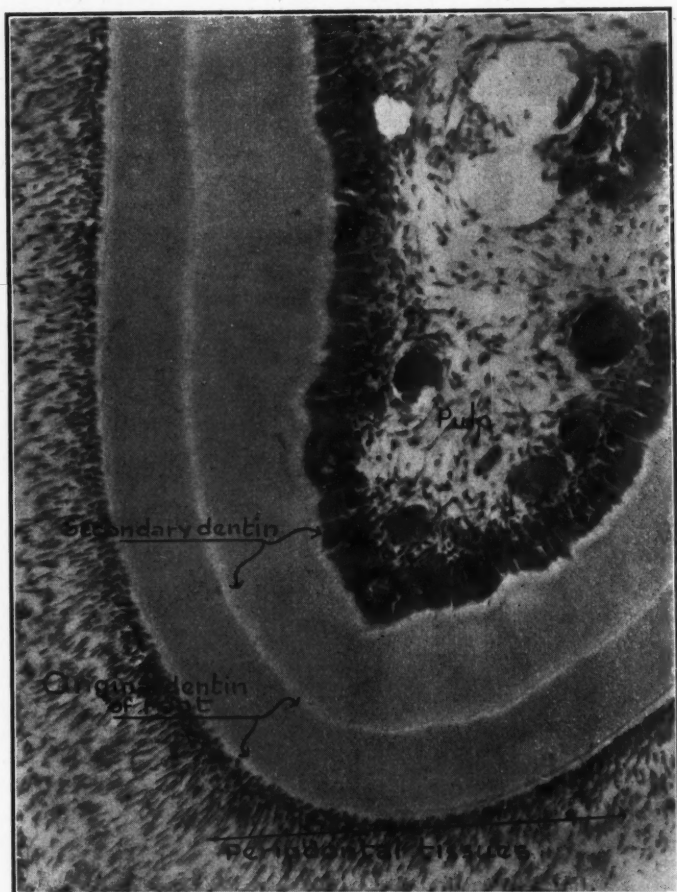


Fig. 4

Section of incisor root of guinea-pig just below the gum line after fourteen days on Vitamin-C-free diet, followed by ten days of orange juice in the diet. There is a partial rearrangement of the odontoblasts, but no return to former positions. There is also extensive calcification of the fluid into secondary dentin.

tions. Your attention was called to the fact that the normal pulps were not shrunk during preparation, and the technic was identical for all sections. The secondary dentin was deposited from the shrunken and deranged position of the pulps, and no section has ever shown the pulps to be shrunk away from this secondary dentin.

A complete deficiency of Vitamin C will kill the animals in four weeks or less. If the deficiency is less complete but more prolonged, the teeth will present great macroscopic changes. The enamel of the incisors may be poor in quality or poorly attached to the dentin or entirely absent. The dentin of the molars may be so soft that it can be penetrated by a delicate instrument, it may wear away rapidly and the teeth may bend into shapes which are entirely unknown in healthy animals.

We may summarize by saying that deficiencies of Vitamin C in the diet of guinea-pigs cause changes in the teeth which are suggestively like those which have often been reported in human teeth following great changes in diet, prolonged illness and even severe mental shock.

#### EFFECTS OF DIET-DEFICIENCIES ON FACIAL GROWTH

The monkeys (*Macacus rhesus*) used in Howe's experiments are brought from the foothills of the Himalayas. A diet has been developed on which they appear to remain in good health. If two young monkeys of like age are placed side by side, one on normal diet and the other on a diet similar in all respects except that it presents a moderate deficiency of Vitamin C, suggestive differences will appear in a few

months. The monkey on the deficient diet will be smaller in all dimensions, but the retardation of growth will not be uniform in all respects, and the aberrations are especially interesting to dentists. Cranial development, which was well advanced when the diet-deficiency was established, will be quite uniformly retarded. That is, the two crania will be much alike, but one will be smaller than the other. But facial development, which gets under way much later than cranial development, is so greatly retarded that the cranium of an adult monkey may present the face of a child, as at the left in Fig. 5. Such development as occurs may be asymmetrical, as is shown by Stanton's surveys. There may not be room enough in the alveolar arch for the permanent teeth, and the posterior nares may be so undeveloped as to necessitate mouth-breathing.

The conclusion from a long series of experiments of this sort is that in monkeys the development of the entire body may be retarded by a moderate deficiency of Vitamin C, and that, from a dental point of view, the retardation may be disastrous. Such experiments are peculiarly suggestive because of the similarity of monkeys and humans in anatomy and physiology.

#### EFFECTS OF DIET-DEFICIENCIES ON THE ALVEOLAR ARCHES

Monkeys, like humans, when fed on normal diet sufficiently hard to insure the maximum benefits of mastication, develop dental arches which are quite wide from right to left as compared with the anteroposterior length, as in Fig. 6. If the animal is fed on a diet which contains a large quantity of



Fig. 5

On the left, the skull of a monkey on Vitamin-C-deficient diet for 23 months. On the right, the skull of a slightly younger monkey which had a normal diet throughout life. Facial development has been retarded more than cranial development.

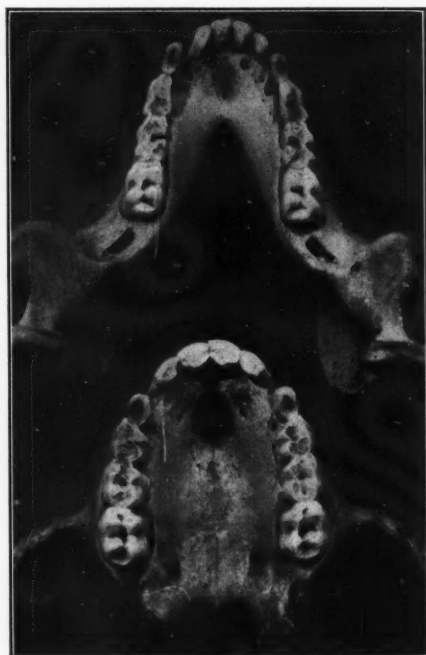


Fig. 6

Dental arches of a monkey on normal diet. For comparison with arches in illustrations that follow, note the width between the first molars as compared with the anteroposterior length.

rolled oats and a deficiency of vegetables and green food, the arch may be much longer anteroposteriorly and much narrower from right to left (Fig. 7). Furthermore, the physiological threshold may be so lowered that caries of the teeth, which is unknown to these animals on normal diet, will be extensive (Fig. 8). Howe is now producing dental caries in these animals at will, solely by variations in the diet formula.

If a slight deficiency of Vitamin C is established over a long period, a deficiency such as may perhaps exist in many homes and in the diet of many children, even greater changes in arch form may result. The arch may become very long anteroposteriorly and very narrow from side to side, so much so as to make the animal appear like one of another species (Fig. 9). Such a deficiency is not likely to cause actual destruction of the bones of the maxillae.

If the deficiency is greater but its duration shorter, the physiological threshold may be so lowered that the animal will be unable to shed the deciduous teeth to make room for the permanent teeth, and there may be great destruction of the maxillae (Fig. 10).

If the deficiency of Vitamin C is great and is alternated with periods in which the animal is fed orange juice, it may be continued until there is not a healthy organ or a sound bone in the body.

The conclusion seems to be that in monkeys slight deficiencies of Vitamin C over a considerable period of time result in marked changes in the forms of the dental arches, and that greater deficiencies for shorter times may pre-

vent development of the proper arch form and destroy the tissues upon which the teeth depend for support.

#### A PRACTICABLE PROGRAM FOR HUMANS

It is not difficult to find in human mouths conditions strikingly like those produced in the mouths of monkeys by slight deficiencies of Vitamin C over a long period and even somewhat like those produced by greater deficiencies for a short period. Other conditions not so easily understood also are present. It is very important that there should be a program which will correct these conditions as they exist today, as far as it can be done, and which looks to preventing them in the future.

In at least the vast majority of cases such a program promises much if it is begun immediately after the teeth erupt—not all the teeth, but the very first teeth—and is carried on at home with reasonable intelligence and fidelity supplemented by some dental-office care.

The temporary teeth should be kept clean and any cavities filled whenever the dentist finds them in his semi-annual inspection. In more than 80% of all children the permanent first molars, which come at the age of about six years, just behind the deciduous teeth and before any deciduous teeth are lost, are defective. These defective teeth may be filled soon after eruption without causing pain and will perhaps remain in good condition throughout life. If they are not promptly filled, the chances are 2500 to 1 that they will decay before the age of 20 years (Hyatt).

If by the age of four and a half or

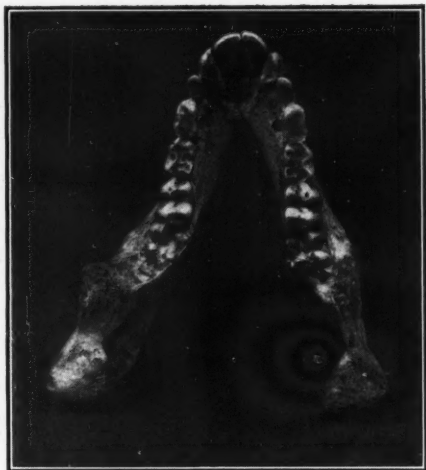


Fig. 7

Mandibular arch of a monkey which suffered from a greater deficiency of Vitamin C than the one whose mandible is seen in Fig. 9. While the distortion of arch form is perhaps not so great as that shown in Fig. 9, there is considerable disturbance of bone formation, so that the condyles are merely club-shaped masses.

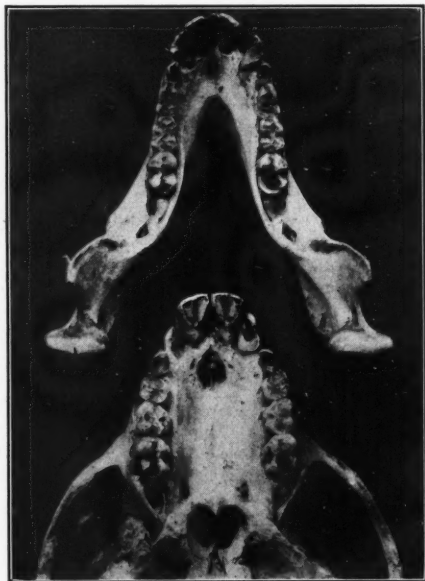


Fig. 8

Dental arches of a monkey which had for 15 months a diet containing an excess of cereals with a deficiency of green food. Extensive caries developed. It can be produced at will by this kind of diet.



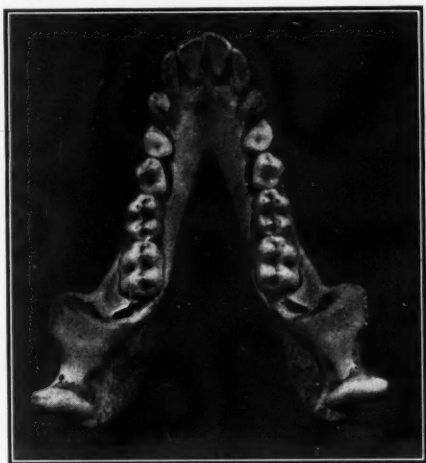


Fig. 9

Mandibular arch of a monkey quite different from the one in Fig. 6, the result of a slight deficiency of Vitamin C over a long period of time. While there has been great change in form, there has been no destruction of bone. The condyles are still practically perfect in form.

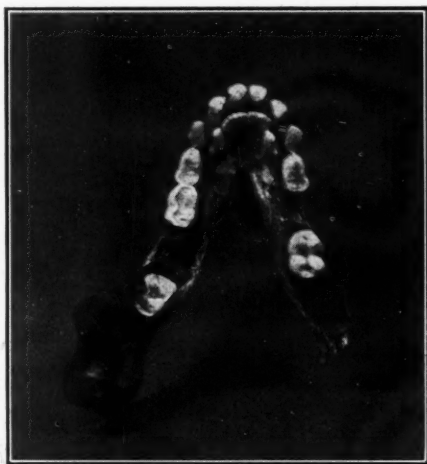


Fig. 10

Portion of the mandible of a monkey whose diet was severely deficient in Vitamin C. Note the great destruction of bone. Compare with Fig. 7. This animal was unable to shed the deciduous incisors to make room for the permanent teeth.

five years the temporary anterior teeth are not separated by spaces between them, it is an unfailing sign of deficient vitality, and that the permanent teeth will be irregular. By suitable orthodontic processes the arch may be spread easily and painlessly. This insures regularity of the permanent teeth, widens the nose, perhaps straightens the nasal septum and often materially benefits the child's health.

Dental-office care may often be limited thereafter to semi-annual inspections and cleanings and the immediate repair of such cavities as may develop, though these should be few, small and painless.

#### MODIFICATION OF PROGRAM FOR ADULT PATIENTS

Because there is no general appreciation of the importance and economy of early and continuous oral and dental care, and because most people do not know how to maintain health in the mouth, gum conditions quite unlike those seen in early childhood are apt to supervene by the time the youngster is in high school, as shown in Fig. 11. There are probably many causes, and they may be different at different ages. Some of them are unknown, but we do know that wrong contacts between opposing teeth, cavities in teeth, deficiencies or excesses in diet and any lowering of the physiological threshold are active causes. Some very competent observers among dentists have shown that the approach of very serious systemic conditions, such as diabetes, is heralded in the gums before it is visible elsewhere in the body.

Such gum conditions are of great importance to you as physicians,

because the healthy mouth tends to stay clean with little attention, while the unhealthy mouth can hardly be kept clean. The mouth with congested gums is an ideal breeding-ground for bacteria, and the saliva, which is sometimes copious and is then freely swallowed, is continuously and strongly reinfected. During early life and vigorous health such oral conditions may not appear to be important, but if the physiological threshold is lowered from any other cause, they may become serious; and with the onset of a serious illness, such as tuberculosis, pneumonia or many of the gastric and intestinal diseases, they may turn the scale against recovery.

The recognition of these gum conditions in sufficient detail for your purposes is very simple. The portion of a healthy gum adjacent to the tooth is relatively thin and of a bright pink color. The festoon forms an even sweep and is never pointed over the center of the tooth neck. The interdental papilla never bulges outward from between the teeth.

Diseased gums may be thin and pale. In some cases the festoons will be pointed. In other cases the festoons and interdental papillae may be puffy and dark red. There may be more or less extensive recession of the gums. You will be on the safe side if you recognize anything except the thin, smooth, bright gums as pathological.

The diagnosis of the causes sometimes requires very extensive dental knowledge and experience, and the correction may need a high order of ability. The right sort of dentist will teach his patient the technic of home care, and it cannot be too strongly empha-

sized that the burden of success in any case depends on the kind and amount of care the mouth receives at home.

You have heard much of the importance of abscesses about the roots of teeth, and some of you are in the habit of securing for your patients clean bills of health in this particular. Thousands of persons who have no

mentioned have forced the subject upon our attention and into our action to a limited degree. We are finding what seem to be new forms of dental caries, and some of them are appallingly destructive. We think that they may be results of the extensive use of the refined foods which have become increasingly common in recent years;

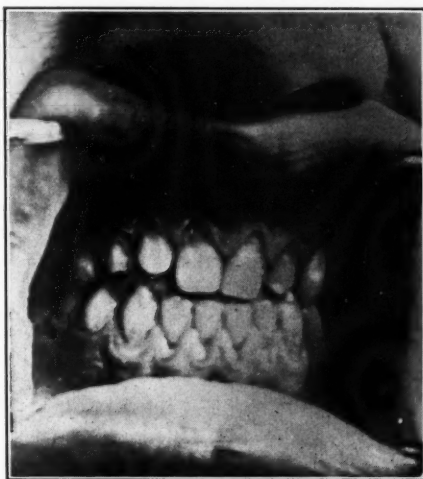


Fig. 11

Destructive forces at work on the gum tissues of a boy, 16 years old, from a financially well-to-do family. (By courtesy of Paul R. Stillman, D.D.S., F.A.C.D., F.A.A.P.)

apical abscesses are suffering from pathological oral conditions, and it is quite probable that the aggregate menace to health is much greater than from all the apical abscesses combined.

#### DIET FROM A DENTAL VIEWPOINT

It may seem to you entirely inappropriate that a dentist should address you on the subject of diet, but some of the conditions which have been briefly outlined and others which have not been

at least, the condition in some cases has been arrested by the addition of liberal quantities of orange juice and green vegetables to the diet or has corrected itself when these were added.

Many of our leading periodontists are of the opinion that the health of the mouth cannot be maintained by local treatment alone in the face of a faulty diet, and that if the best success is to result, the diet must be suitable.

The fact that whenever the digestive functions are deranged, each person becomes more or less a law unto himself as to what he can and should eat disqualifies the dentist from becoming, in any serious sense, a dietitian. The ideal condition is that the dentist shall cooperate, in this work, with some qualified physician for cases which are at all serious, merely making it plain that oral health requires a liberal daily intake of uncooked fruits and vegetables and milk, preferably pure and whole, and the elimination or reduction of refined sugar, refined cereals and meat. Some of the food must be eaten in a form which requires vigorous mastication.

Among the fruits, as seen from the dental viewpoint, oranges stand

supreme for those who can eat them, because of the wonderful balance of organic acids, sugar, calcium and vitamins. If the inner portion of the peel and all the partitions are eaten, very valuable roughage is obtained. Lemons, grapefruit and pineapples are particularly valuable, followed in decreasing value by all the other raw fruits.

Among the vegetables we consider that the tomato stands first, with cabbage, spinach, lettuce, squash and others valuable also.

Perhaps the human mouth, rightly understood, is quite as important to the physician and surgeon as it is to the dentist. Together they should be able to keep it healthy, a clean gateway to the body.



*When dentists learn to tell the wonderful health story dentistry offers, there will be no trouble about patronage and fees.*

## A New Surgery and a New Filling for the Pulpless Tooth

By HOWARD TEMPLE STEWART, D.D.S., New York, N. Y.

"The castigation of septic dentistry by Hunter and the almost immediate demand of the medical profession for relief from this supposedly newly discovered source of bodily ills, which focused itself upon the pulpless tooth, and the willing submission of the dental profession to what was apparently the quickest and easiest mode of affording such relief, namely, removal of the suspected teeth, proved to be a most serious impediment toward the logical solution of the problem. The combination of the physician, the radiographer and the exodontist for the moment completely overshadow the efforts of that conservative group who were making efforts to perfect a technic which would make the pulpless tooth an efficient and harmless unit of the masticatory apparatus. And today we are not yet fully awakened from the nightmare of ruthless tooth destruction which has shaken the very foundations of dental practice."—(Extract from Editorial, *The Dental Cosmos*, April, 1930.)

Dr. Charles Mayo says: "The modern dentist in practice concerns and should concern himself not only with the teeth but also with the jaws and the whole oral cavity. Local lesions in the oral cavity may be the cause, the effect or the sign of local, systemic or organic disease anywhere in the body, and some organic, systemic or local diseases may and do produce various signs in the oral cavity. Consequently, the dentist who looks into a patient's mouth will miss something of vital importance to his patient if he sees only teeth. . . ." Yes, and I may add that the physician who looks into his patient's mouth and *sees only the teeth* "will miss something of vital importance to his patient"—and, believe me, many physicians for very many of their patients seem lately to see only the teeth!

"A human being has thirty-two (32) teeth, unless he or she decides to cure neuritis on expert medical advice," according to the *Ohio State Journal*. This editor evidently had a backwoods sense of humor and natural common sense. But the trouble is that the dentist him-

self quickly subscribes to the doctrine of condemning pulpless teeth on suspicion, because he does not want to treat them. It takes too much time. The patient will not pay. The result may be uncertain. The patient learns all about what these teeth do to people and asks embarrassing questions. He says, "The tooth isn't worth it." He is much more willing to pay for a bridge, and he is glad when the tooth is out because his mind is relieved. The dentist is glad, too, for no brother (?) practitioner will take a picture and say the treatment was criminal. Besides, he gets the ready, willing money for the bridge—and so there you are!

C. N. Johnson says: "To properly treat and fill a pulpless tooth is not very spectacular nor profitable. It is easier, by far, and much more remunerative to extract these teeth and insert substitutes. How much this fact is accountable for the loss of so many teeth I am not permitted to say, but *I have some very pronounced suspicions.*" (Italics mine.)

And when I think of the clink of the forceps and the rattle of the commer-

cial laboratories, of teeth yanked out by the thousands and one-piece castings made by the hundreds; when I think of the impressions sent to these laboratories and the pieces that are hammered into the mouth, I am reminded of what another lay paper (*Kay Features*) has to say: "You never see a blacksmith now, but before they all left, they made enough money to put their sons through dental school." Even the lay papers are beginning a revolt. The people generally are sensing that there is something wrong in all this wholesale extraction of teeth. They are beginning to ask, "What is dentistry for?"—and with good reason.

More than sixty years ago William H. Atkinson said: "Legitimate dentistry consists of the preservation of the natural teeth in a healthy state to the end of life. The reason that more is not known on this subject is because of the general belief that there is no money to be gotten out of it, *and this idea necessarily closes the field of vision.*" (Italics mine.) This thought and this influence have been ever present—the feeling of impatience and resentment smoldering until at last it has broken into a devastating conflagration. There has been a drunken orgy of destruction. C. N. Johnson says that "there has never been so much definite damage done to the people by any propaganda in the history of dentistry as by the well-organized propaganda against the pulpless tooth."

It is to be deplored that so much loose writing is being done (without proof) on the pulpless tooth. It is this general oft-repeated "half-baked" gratuitous instruction from those who are not scientific investigators and thinkers,

but who are persistent "lime-light" writers, that confuses the issue. They do more harm to a cause than men who have experiment and real investigation behind them, and who are avowedly hostile to the cause. When men like Price and Rosenow and Lucas and Haden announce flat-footedly all they claim, the profession has a chance, because we know exactly where they stand. Their very emphasis and gross exaggeration of what the pulpless tooth does to people counteracts largely the baneful influence of their reports, because men intuitively (and by every-day observation) know that it is impossible for the results which they claim to be true. We know that if these men's claims were true, the most of the (now living) adult population would be dead and one-half the remaining hopelessly diseased, and so men take these fanciful effects claimed with many grains of salt. They do not believe that, because certain cultures are made and rabbits diseased with injections, people carrying a pulpless tooth are diseased in the same way, but there is a class of persistent writers who simply befuddle the minds of those looking for light. In illustration of this we give a table from the book *Clinical Periodontia*, by Stillman and McCall, essaying to tell us what teeth to extract.

Just picture yourself (the average dentist) arranging to treat a pulpless tooth according to this table. First (it being a simple matter), you must find out if the patient is in good health; otherwise you must not treat that tooth, no matter if the patient does need it more than the fellow in good health. That being decided, find out whether he is free from debilitating disease; if



When to

	Treat	Extract
General health	Good	Below normal
History (personal and family)	Freedom from debilitating disease	Susceptibility to disease
Age	Below fifty	Above fifty
Blood (factors concerned in resistance)	Normal constituents and cell count	Abnormal constituents and cell count
Site of secondary infection	Tissue of high regenerative power, as muscle	Tissue of low regenerative power, as eyes, ear, nervous system
History of tooth	Periapical disease absent or of recent inception	Prolonged periapical disturbance
Radiographic findings	Little or no periapical or periodontal derangement	Appreciable periapical or parietal bone alteration
Field of operation	Accessible	Inaccessible

so, then see if his family also is free from debilitating disease. If so, treat; if not, extract. If everything else is favorable (the "Treat" column getting all the other votes), if he is below fifty, treat; if he is above fifty, extract. Then take a blood count. If you find "normal constituents and cell count," you treat; "abnormal constituents and cell count," you extract. (Never mind that few people can furnish a normal cell count.) Now, find out whether there is a site (somewhere in the body) of secondary infection, and, while you are at it, just find out if it is from the teeth (it will take only a minute). If the site is in the muscle, treat; if in the ear, extract. Then get the history of that tooth. The periapical disease is either recent or prolonged; find the dividing line—and treat or extract. Now take an x-ray. If you find "little or no periapical or periodontal derangement," treat; if you find "appreciable periapical or parietal bone alteration," extract. (Never mind if some of those showing no lesion most affect the system.) And, last but not least, if you find the "field of operation

accessible," treat; if "inaccessible," extract. All this being expeditiously done, so as not to take up too much of the hour you are giving to the patient, you know exactly what to do.

This would make the judicious grieve. Is it possible that men can take such literature seriously? I can think only of Don Quixote and Sancho Panza!

Hatton gives as the three most frequent causes of failure in the treatment of the pulpless tooth the following:

- (1) "Failure to remove all the pulp tissue."
- (2) "Failure to fill the full length of the canal."
- (3) "Failure to fill the full diameter of the canal, thereby inducing, by capillary attraction, a diffusion of body fluids and septic and toxic materials in and around the root filling."

The process I have given answers all these requirements. Two papers in *The Journal of the American Dental Association* (March and October, 1930) set forth my views in detail:

- (1) The pulp tissue is necessarily re-

moved if the entire canal is enlarged as illustrated.

- (2) The full length of the canal is then easily filled.
- (3) The full diameter is easily filled, because the material spreads so readily when carried to the apex.
- (4) In addition to these, the material displaces the moisture from the end of the canal as does no other material, and in such a way that there is no leakage afterward. Test this by filling a glass tube placed on wet cotton, then immerse the tube in methylene blue; it will not leak.

For the sake of those who have not seen the articles referred to, I will say that the material is pure tinfoil and pure gold foil mixed with mercury, about one part tin to two of gold. This is amalgamated (just as you would mix ordinary amalgam for filling crown cavities) to a soft consistency. Of course, it should be mixed not in the hand but in a mortar. This does not set like cavity amalgam, but remains permanently plastic. It should be carefully protected from dust. I am very much afraid of dust carried into the apical region.

Much has been written of the requirements of a root-canal filling material that we have dreamed of. Some of those requirements are as follows:

- (1) It must be impermeable to fluids.
- (2) It must be non-absorbable.
- (3) It must easily and accurately fill the entire canal.
- (4) There must be no leakage between the filling and the walls of the canal.

- (5) It must not be irritating to the tissues about the apex.
- (6) It must show plainly in the x-ray.
- (7) It must be easily removed. The gold-tin-mercury mixture seems to be ideal for all these requirements.

I am often asked what percentage of teeth can be made healthy and saved by my method. I can answer this only by saying:

- (1) That I have not condemned a single tooth on account of its apical condition nor refused to treat one on account of any systemic condition whatever, not even Bright's disease, diabetes or syphilis.
- (2) That I have treated every one presenting, if allowed to do so.
- (3) That so far I have not had a failure where I was able to get through the foramen. This, of course, means the cases that have remained in my hands—and nearly all of them have.

There have been over three hundred cases. In every one of them the clinical results seem all that could be expected or desired. These results have usually been so ideal that each one has been a source of surprise and delight. But I do not mean to convey the idea that this has been an easy task. If any man expects to treat pulpless teeth as easily as he can extract and insert a bridge, he might as well stay with the "hundred-per-centers."

It is, of course, understood that a few of these cases were hopeless from pyorrhea when I filled them for experiment. Some of these I extracted, and in each case I found *no filling material*

in the socket. The tissue had grown in between the end of the root and the surplus metal and entirely encapsulated the metal, cutting off the material smooth with the end of the root. It is to be noted that seemingly no effort had been made by the tissues to expel or even move the metal after extraction. This seems to demonstrate perfect toleration by the tissues. In each case of pyorrhea the tissues about the tooth improved without any treatment except through the canal.

A point to be remembered is that we are speaking chiefly of "infected" cases. More than ninety per cent of the cases I have treated have been teeth that have been "dead" anywhere from one to many years, teeth that even the root-canal-filling advocate advised to be extracted. The chief idea in treatment is *drainage*. With my procedure an entirely new system of drainage is advocated. We have always been taught to avoid wounding the membrane or bone, *not* to enlarge the foramen and not to disturb the tissue in the bone. But the infection is in the bone. The surgeon does not hesitate to drain the bone or to wound it if necessary to get rid of necrotic tissue, and we must remember that there can be no "immediate root filling." In such cases a principle that commands the greatest respect from surgeons is that "in every wound the necrotic tissue must eventually be disintegrated and eliminated before healing can occur," and we must remember that the seat of infection is in the bone and peridental membrane.

#### CASE I

This case was shown in a former paper (*J.A.D.A.*, October, 1930), with

two illustrations only. The five pictures presented here show the case covering about six months.

Fig. 1 shows the tooth (cuspid) as it appeared before treatment. Note the extensive denudation of the apex, especially on the mesial. The canal was enlarged and the foramen made funnel-shaped.



Fig. 1

The tooth (cuspid) before treatment. Note the extensive denudation of the apex, especially on the mesial. (Case I.)

Fig. 2 shows a copper rod in position. The rod was used to stimulate drainage and tissue regeneration.

Figs. 3; 4 and 5 show progressive regeneration of the apical tissues after filling. Still more calcification is expected. The central was even a more severe test. Two large perforations of two years' standing were found, one



Fig. 2

A copper rod in position in the tooth shown in Fig. 1—to stimulate drainage and tissue regeneration. (Case I.)



Fig. 3

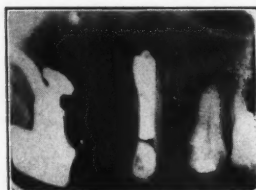


Fig. 4



Fig. 5

Figs. 3-5  
Showing progressive regeneration of the apical tissues after filling. (Case I.)

to the labial and one to the palatal of the apex, evidently made with a drill. The gum was badly swollen on both aspects, with pus exuding at the margin about the entire circumference of the tooth. The clinical result of both these teeth seems perfect. It is to be understood that such a case is shown to demonstrate what real drainage will accomplish, and how well the material is accepted by the apical tissues.

## CASE II

Fig. 6 shows an extreme case, which speaks for itself.

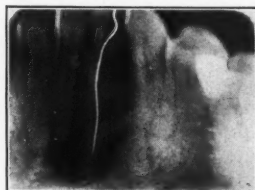


Fig. 6

An extreme case before filling. (Case II.)

Fig. 7 represents the x-ray appearance about five months after filling.

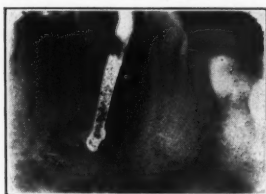


Fig. 7

The same case as in Fig. 6—after filling. (Case II.)

## CASE III

Figs 8 and 9 represent an average case.

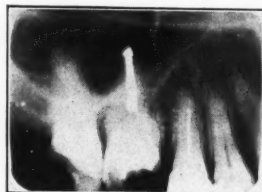


Fig. 8

Figs. 8-9

An average case. (Case III.)

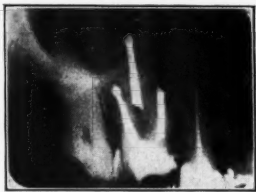


Fig. 9

## CASE IV

Fig. 10 represents another average case.



Fig. 10

Another average case. (Case IV.)

## CASE V

Fig. 11 shows a third molar and a second molar filled, and Fig. 12 the site of a bicuspid which was filled and extracted. The retained filling in the bone could not be seen in the socket after the tooth was extracted (about three months after filling). There is



Fig. 11

A third molar and a second molar filled. (Case V.)



Fig. 12

The site of a bicuspid which was filled and then extracted. (Case V.)

now no sign of irritation about this material, and the tissue is in perfect health. The tooth has been extracted about two years. This bicuspid was in the last stage of pyorrhea when filled. The second molar was very badly involved, especially the mesial root, the bone being gone practically to the end of the root. The third molar also was in bad shape from pyorrhea.

The tissues about all three of these teeth improved very markedly after filling.

Lest I be misunderstood—I have no quarrel with either the average dentist or the average physician. The dentist is surrounded by such conditions and influences that he cannot well see his way out economically, and the physician is being guided largely by the work we have shown him. Look at the reports of Hatton, Skillen and Moen, who state that out of 500 treated extracted teeth examined they found only one that entirely answered their requirements.

Look at the reports we give to physicians that the majority of roots cannot be opened to the apex. I want to nail that lie right here by saying that there are very few roots indeed, either single or multiple, that cannot be opened to

the apex. It is not because men *cannot* open these teeth; it is because they *will not*. Why do I say this? Because up to five years ago I could not open these teeth *because I had never tried*, and since then I have been able to open

them because I have tried. That is the whole thing in a nutshell.

In conclusion, I would earnestly urge a patient opening of canals, through drainage and careful placing of this filling. The results will be a surprise.

"The radiographic evidence of success of this method of filling root canals, as Dr. Stewart presents it, is such as to warrant a most thorough clinical study and test of the method by various investigators in this field, with the definite objective of perfecting a method of procedure by which we may remove the stigma that failure to efficiently deal with the pulpless tooth has brought upon dentistry." (Editorial, *The Dental Cosmos*, April, 1930.)

597 Fifth Avenue





# Odontology and Stomatology In Soviet Russia for the Past Decade

By PROF. GEORGE RANDORF, Leningrad

## FOURTH ARTICLE

### THE ALL-UKRAINIAN STATE INSTITUTE OF STOMATOLOGY AND ODONTOLOGY IN ODESSA (*Continued*)

Before proceeding further with the year's progress in the theoretical and practical work at the Institute itself, let us see what the Children's Polyclinic under its auspices did for their young clients for about the same period.

The results of the work at the Chil-

dren's Polyclinic organized by the Central Odontological Polyclinic of the District Health Department at the Third Ambulatory (the Port District), from April 1, 1928, to February 1, 1929, were as follows:

Number of visits:		
For the first time.....	926	
Repeated visits .....	2217	
		3143
Children of working men.....	62.7%	
Children of working employers.....	37.3%	
Girls .....	58.6%	
Boys .....	41.4%	
Age 2-7 years.....	40.0%	
Age 7-12 years.....	26.5%	
Age 12-18 years.....	33.5%	

## CHARACTER OF DISEASES

Number of carious teeth, temporary.....	1843
Number of carious teeth, permanent .....	1191
Average 3.3% carious	
Caries, simple .....	740
Caries, gangrenous .....	913
Diseases of the mucous membrane.....	129 (14%)

## TREATMENT

Cleaning:		
Permanent teeth .....	318	(43%)
Temporary teeth .....	141	(16.4%)
Filling:		
Permanent teeth .....	755	
Temporary teeth .....	923	
Extraction:		
Permanent teeth and roots.....	246	
Temporary teeth and roots.....	611	
Removing tartar .....	125	
Fillings:		
Silver amalgam .....	146	
Copper amalgam .....	736	
Cement .....	549	
Temporary .....	247	
		1678

## THE DENTAL DIGEST

Directed to the Ukrainian State Institute of Odontology and Stomatology for:

Radiographs .....	18
Surgical operations .....	23
Number of children who had to be refused dental help .....	114 (12.3%)

### SERVICE STAFF

- 1 General Dental Assistant for all Doctors.
- 1 General Registrar.

### Prophylactic Work of the Second Children's Polyclinic for Mouth Hygiene for School Year 1928-1929

Number of schools investigated .....	43
Number of children examined for the first time .....	1249
Prophylaxis to students .....	1249
Number of students in a group .....	1574
Number with sound teeth .....	754
Number received cleaning first time .....	282
Number received cleaning repeated .....	176

### OPERATIVE WORK

Number of teeth filled .....	316
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### SURGICAL WORK

Extractions:	
Permanent teeth and roots .....	11
Temporary teeth and roots .....	217

### THE STAFF

- 2 Dentists (2 chairs). 1 Nurse. 1 Dental Assistant.

### ORAL HYGIENE WORK

Talks to children at the time of prophylaxis.

### SALARIES PAID

It will also be of interest to learn what those who work for the Institute are paid.

### THE STAFF

Director .....	Rbls. 1800 per year
Secretary .....	Rbls. 750 per year
Statistician .....	Rbls. 750 per year

### DEPARTMENT OF SURGICAL DENTISTRY

Superintendent .....	Rbls. 1320 per year
First Assistant .....	Rbls. 630 per year
Second Assistant .....	Rbls. 388 per year

### DEPARTMENT OF CONSERVATIVE DENTISTRY

Superintendent .....	Rbls. 1320 per year
First Assistant .....	Rbls. 570 per year
Second Assistant .....	Rbls. 360 per year

### DEPARTMENT OF PROSTHETIC DENTISTRY

Superintendent .....	Rbls. 1200 per year
First Assistant .....	Rbls. 630 per year
Second Assistant .....	Rbls. 540 per year
Dental Mechanic .....	Rbls. 1000 per year

### DEPARTMENT OF EXPERIMENTS

Staff Consultant (Pathological Physiology) .....	Rbls. 900 per year
Staff Consultant (Physiology) .....	Rbls. 900 per year
Staff Consultant (General Pathology) .....	Rbls. 900 per year
Laboratory Assistant (Biological Physiology) .....	Rbls. 1080 per year
Laboratory Assistant (Pathological Anatomy) .....	Rbls. 1080 per year
Laboratory Assistant (General Pathology) .....	Rbls. 1080 per year
Laboratory Assistant (Bacteriology) .....	Rbls. 1080 per year
Laboratory Helpers .....	Rbls. 840 per year

DEPARTMENT OF SOCIAL ODONTOLOGY

First Assistant .....	Rbbs. 630 per year
Second Assistant (for School Dentistry) .....	Rbbs. 540 per year
Dental Consultant .....	Rbbs. 400 per year

DEPARTMENT OF PROSTHETIC DENTISTRY

Dentist .....	Rbbs. 1080 per year
Nurse .....	Rbbs. 690 per year
Dental Assistant .....	Rbbs. 840 per year
Resident Dentist .....	Rbbs. 1140 per year

In resuming the examination of the achievements of the first year's work of the State Institute it must be observed that some of it was not altogether original but presented elaborations of researches that had been carried on for many years and had received encouragement from one or the other of the three Dental Congresses which took place (1) in Moscow in 1923, (2) in Harkov in 1925, and (3) in Lenin-grad in 1928.

Here will be given the results of the work on replantation, on which the chairman of one of the Congresses passed judgment by saying that it was "an interesting and conscientious work having a social significance."

I am not quite sure that the right terminology is being used here in Russia, for according to Dr. Louis Jack of Philadelphia we should use "implantation—where an artificial alveolus is made by the trephining process at a vacant place, in which opening a suitable natural tooth is introduced; replantation—where any given tooth of a person for various reasons may have been removed and, after a certain manipulation of the tooth and treatment of the socket, is replaced; and transplantation—where teeth removed from one subject are, with proper precautions, placed in an alveolus of another immediately after the extraction of a diseased or fractured tooth."

The work in question was based on the experience of the World War, which had shown that the treatment of a jaw trauma required a highly qualified specialist. Besides, it was found that the wounded were brought to the hospitals too late, sometimes after weeks, when the wounds had formed scar tissue and the deformities of the jaws were too hard for correction, requiring many months of hospitalization, while the individual method of jaw orthopedy required experienced doctors and technical workers of high qualification. At that time a method was needed for mass surgical treatment of trauma of the jaws and neglected teeth as well.

A committee at the Central Polyclinic of the State Institute approved the rationality of the peculiar method of replantation worked out by the present director of the Institute. The "new" method was a happy resuscitation of an old one which had been unfortunately forgotten by the great majority of dental workers. The reason for the neglect probably lay in the complicated preparation of an artificial alveolus or rim, as there generally were no technical laboratories outside the cities. Besides, the preparation of a metal rim required many hours and was generally very expensive, both of these circumstances limiting its mass application and making the dental surgeon

dependent on the dental mechanic. All of this led to experiments on methods of standardization of rings and all kinds of wires. Turning away from materials in the line of metals which could be substituted for them, a solution of celluloid was selected.

It was known that celluloid dissolved easily in acetone and in spirits with ether. After evaporation the acetone formed a tough crust, the properties of which were made a subject of study and experimentation at the biological department of the State Institute with the following results:

(1) The celluloid crust obtained after the evaporation of the acetone had neither the taste nor the odor of camphor, those characteristic features which made celluloid so disagreeable for use in prosthesis.

(2) The crust of celluloid, dissolved in acetone as a colloidal mass, had the property of complete impermeability to any solution. Experiments proved that a plain iron wire dipped in a solution of the crust of celluloid did not show any trace of rust for many days, even if it had been in water or saliva with the thermostat at  $7\frac{1}{2}^{\circ}$  C.

(3) The crust from a solution of celluloid in spirits (95%) with ether was permeable, and a piece of iron wire enclosed in such a crust for a short time underwent oxidation to a considerable degree.

(4) A model of plaster of Paris covered with a layer of a liquid solution of celluloid, after two minutes' drying in the sun in summertime or in the cold season in some oven or other warm place, received a varnish of a few new layers of celluloid, forming a crust which after drying could be

removed from the model representing an ideal likeness of the form of the teeth and the alveolar arch. In other words, it formed the shape of an ideal dental rim.

In cases of missing teeth an ordinary iron wire was first glued in if the celluloid had been dissolved in acetone, and an aluminum wire if it had been dissolved in a solution of spirits with ether, as aluminum does not oxidize. Observations showed that celluloid which had been dissolved in acetone gave a more exact rim than that dissolved in spirits (95%) with ether.

The use of celluloid rims spread rapidly, and they are frequently applied at the clinics and the State Institute as well as at other institutes of Odessa. Such a rim solves the problem of mass replantation, since the cost of producing it is very low indeed and its preparation requires no special knowledge. A celluloid solution and a brush suffice, which any dental assistant could apply.

Thanks to the exceptionally easy ways of introducing metallic devices, there is a possibility of substituting celluloid rims for those made of metal. This consideration is of special value in war conditions, when it is necessary to be in position to prepare the apparatus almost on the spot in the trenches or at the nearest ambulance station, or in peace conditions, say, in mines, on buildings and other constructions, i.e., in such places where cases of trauma of the jaw may occur and when a rim, timely applied, would save the wounded serious consequences.

One of the most remarkable properties of the celluloid solution is the durability of its crust. Any little hook or piece of iron pressed into it will be

retained with extraordinary solidity, and it has a great breaking resistance. The special film at the Third Dental Congress demonstrated a man wounded in the jaw, with a large rim provided with clasps and rubbers, who also showed the strength of this kind of rim both at the opening and at different lateral movements of the mouth.

By means of the new apparatus it

required in many cases but a few hours to make the working man again fit for work and the soldier fit to take his place in the ranks.

The Polyclinic of the State Institute practiced replantation in cases where resection could not be used, that is, in cases of multi-rooted molars and also in cases of chronic suppurative processes of the periosteum.

#### ELECTION OF OFFICERS

The Class of 1915, New York University Dental College, was organized into a unit on September 17, 1930. The following officers were elected: Samuel Feldman, Chairman; Jay

Rosten, Sec'y-Treas.; Chas. Bergman, Editor.

The members of this class who have not enrolled in the unit are requested to do so by communicating with the Secretary, Jay Rosten, 456 Grand Avenue, Brooklyn, N. Y.



# DIGESTS

## INFLUENCE OF DIET ON BONES AND TEETH

By W. McKIM MARRIOTT, B.S., M.D.

A diet that is adequate for the normal development and maintenance of the teeth is not complicated and does not require the services of a dietitian. The proprietary preparations of the food faddist are not necessary.

From the standpoint of dental nutrition milk is the most important article, and a child should take not less than one and one-half pints a day, an adult one pint and the expectant mother one and one-half pints. The milk may be in any form. Both adults and children should take one or two ounces of butter daily. Oleomargarin does not contain the same vitamin content.

Adults require two eggs a day, young children one, while infants after the fifth month should receive the yolk of an egg. Two green vegetables should be eaten each day, and preferably one of them should be raw, such as lettuce, cabbage, etc. Fresh fruit is a requirement, especially oranges. Finally, there should be some rough or hard foods, toast, zwieback, rough breads or cereals.

In the case of infants there should be an intake of milk equivalent to one-tenth the body weight, one or two tablespoonfuls of orange juice, and from one-half to one and one-half teaspoonfuls of cod-liver oil two or three times a day. After the sixth month egg

yolk, green vegetables and cereals should be added.

Expectant mothers and children with dental defects should receive cod-liver oil or viosterol. There is no need to add calcium preparations unless the amount of milk falls below the requirements given above.

When these essentials have been taken, the rest of the diet matters little, except that the total amount of calories should provide for growth in the child and should cause neither obesity nor poor nutrition in the adult.—*The Journal of the American Dental Association*, September, 1930.

## PHLEGMONS OF FLOOR OF MOUTH

By WASSMUND

Although the reported mortality rate is about 40% for this condition, the author claims much better results. The majority of his cases developed from suppurative processes in the mandible, especially from carious teeth. The suppurative spreads from the bone to the softer tissues.

One hundred forty-three of 178 cases of suppurations of the floor of the mouth were abscesses, the other thirty-five being of the phlegmonous type. The latter form develops if the suppurative spreads directly from the bone to the loose connective tissue. All suppurative foci should be opened and



drained. Some of the etiologic factors are extraction wounds, accidents in local anesthesia, and osteomyelitis of the mandible. — *Münchener Medizinische Wochenschrift*, May 23, 1930. (Abstracted in *The Journal of the American Medical Association*, August 23, 1930.)

### THE IMPRESSION PROBLEM

By M. M. DeVAN, D.D.S.

Instead of being the foundation of a denture the impression is only a means to an end, namely, the distribution of the forces of mastication to the various parts of the mucosa. The aim should be physiological tolerance rather than maximum efficiency. The author no longer endeavors to secure the maximum plate outline but rather the safe minimum.

A suitable impression material should give the desired outline form, the desired adaptation and the desired tissue modifications (compression and

relief). Plaster is the best material for securing adaptation, but sometimes it is lacking in outline form. A plaster impression cannot be corrected. It is possible to compress tissue with plaster, but it is not ideal for this purpose. However, the addition of a substance such as pulverized gum tragacanth is a big improvement. The following formula is used:

Two level tablespoonfuls of high-grade impression plaster to six teaspoonfuls of water, to which are added five grains of pulverized gum tragacanth. Spatulate for thirty seconds with a stiff spatula. This mix will stay put.

Modeling compound is the best material for securing outline form, and it also compresses tissue. Different makes of compound act differently. It is not possible to be sure of adaptation, and it should be borne in mind that unless it is thoroughly chilled it is plastic and subject to distortion. Postdamming and saddle compression in rebasing should be done with wax. —*The Dental Cosmos*, September, 1930.

## Foreign Dental Literature

Edited by JOHN JACOB POSNER, LL.B., D.D.S., New York, N. Y.

### INFLAMMATION OF THE MUCOUS MEMBRANE OF THE MOUTH

By ALBIN HENTZE, Kiel, Germany

In the treatment of diseases of the mouth many errors creep in which are due to the neglect of physicians as well as dentists. The physician may

treat the patient according to the etiology of the disease and yet overlook such important factors as sharp teeth, calculi, caries, old roots and unhygienic and improper appliances. The dentist often goes ahead and handles the case without a thought as to the etiology of the condition.

A case is cited in which the patient complained of a burning sensation in

the tongue, and her dentist used silver nitrate for seven months in an effort to help the condition. Following proper investigation it was found that hyperacidity of the stomach was the true cause, and under treatment all symptoms quickly subsided.

A physician treated a case of catarrhal stomatitis unsuccessfully because he allowed a heavy deposit of calculus to remain about the necks of the teeth. As soon as the teeth were thoroughly cleaned, improvement quickly followed. The author stresses the increasingly important advice that physicians and dentists should cooperate more closely.

It is of importance for the dentist to realize that many of the general diseases have manifestations in the mouth. Mercury, bismuth and tin poisoning are easily recognized through their effect on the gum tissue as well as their effect on the walls of the stomach.

The cause of disease is to be looked for in the long striated capillaries. It is here that the blood flows very slowly as compared with its rate of speed in the larger vessels, and the blood comes in contact directly with the outer surface of the capillary consisting of but a single cell. Here the interchange takes place between the blood and its poisons and the cell. The capillaries in the gum and tongue play an important part in diseases of these parts as compared with the short capillaries found in the skin and connective tissue.

Injury to the long capillaries of the gum and tongue through bacterial poisons may be seen in typical scarlet fever and general sepsis.

Improper diet has a most important bearing on the state of health of the gums and tongue. Two students were

selected for an experiment in this regard and were fed on an exclusive meat diet for ten days. They developed painful and bleeding gums. They were then given a milk and vegetable diet, and after five weeks all troublesome symptoms disappeared. The poisonous element in the meat diet is recognized as histamin.

#### USE OF TOBACCO

Many dentists and physicians regard smoking as harmless and may even recommend it to their patients. The danger lies not merely in the nicotine, which is a definite poison, but in the by-products of tar produced through the burning of the tobacco. These substances produce a severe irritation of the gums and soft tissues, which may lead even to carcinoma.

#### APHTHOUS STOMATITIS

Aphthous stomatitis is the initial condition brought about through parrot fever or psittacosis. The saliva in these cases is infectious.

The symptom of psittacosis is edema of the mucous membrane of the mouth. The tongue is swollen, sensitive, and covered with scabs. There is a burning thirst and a pseudomembrane on the gums similar to Vincent's infection. The patient complains of pains in the head and back with chills and fever. Parrots from the Argentine are carriers of the disease, but those from Africa, Asia and Australia are safe. At the first signs of the disease the mouth should be gargled with  $H_2O_2$ .

#### VINCENT'S ANGINA

Vincent's angina is seen in two forms, the ulcerous and the pseudo-

membranous. The latter is distinguished from the former essentially through its severity, location of the lesions and the blood picture.

The ulcerous form is not severe; the patient goes about normally. A deep craterlike ulcer may develop on one of the tonsils, with a yellow or gray-green coating. There may be other ulcers on the gums and uvula. The regional lymphatics are noticeable and sensitive. The ulcers disappear slowly, usually after two or three weeks.

The pseudomembranous form of Vincent's angina shows itself as a far more serious infection. Sore throat with difficulty in swallowing is manifest, together with high fever, headache and inability to work.

Both tonsils are reddened and swollen and covered with a dull gray film. All regional lymphatics are enlarged and tender. There is an increase in the leukocyte count. After one or two weeks the symptoms subside, but the patient is anemic and weak for a long time.

In both types of Vincent's we have a lymphatic involvement. This is similar to the picture in lues, and it must be remembered that in both cases a spirillum is the causative factor.

Vincent's infection was first discovered by Miller, and it must always be borne in mind that these bacteria may be frequently found in normal healthy mouths.—*Die Fortschritte der Zahnheilkunde*, August, 1930.

## A SYMPOSIUM ON FOCAL INFECTION

By GERMAN RESEARCH WORKERS

BIELING, Frankfort-on-Main. — The

author believes that the work of Rosenow showing that dead teeth cause infection of other organs in the body has led to unnecessary extractions. He does not dispute the fact that there is evidence that a chronic granuloma may produce diseases of the kidneys, heart and muscles. All of Rosenow's methods of bacterial investigations are not entirely correct and several of his findings are open to dispute. He mentions in support of this lack of positiveness that, while Rosenow found three bacteria in a root granuloma, another worker tabulated twelve. Especially has the theory of transmutability of bacteria been hotly disputed. Animals injected with streptococci may have already harbored other bacteria, which in turn may have become activated, thereby rendering uncertain the true cause of the disease.

E. KRUCKMANN—Iritis Following Focal Infection. The fact that iritis was so frequently accompanied by impairment of the joints, muscles and tendons led to the adoption of the term *rheumatic iritis*. In most of these cases the true cause was a focal infection. Streptococci and diplococci were generally the offending organisms. Among those places most likely to harbor germs are the urethra, tonsillar crypts and dental granulomata, the latter being the most frequent source. Any cocci from these sources may produce the same clinical picture in the iris. The unfilled root canal is an especially dangerous agent. After the treatment or removal of the teeth involved, a healing of the eye condition takes place, even if the condition has been one of long standing.

O. LOOS, Frankfort—Dentistry and Focal Infection. The question often

arises as to whether or not a tooth is to be extracted merely because it has been devitalized. The complication in such cases may be the presence of an expensive bit of bridgework which has been but recently inserted. The tooth might give no trouble and also show negatively in the radiograph. Loos believes that there is little doubt as to the connection between diseased teeth and systemic illness, such as kidney and heart conditions.

H. SCHOTTMULLER, Hamburg—*Focal Infection*. Innumerable people have long-standing focal infection without becoming ill. *Streptococcus viridans* is always to be found in the normal mouth and is therefore not to be held accountable for pathology when found at the focus of infection. It should require considerable reflection to accept Rosenow's statement that one and the same streptococcus viridans is the cause of a long list of diseases. Since Rosenow in his report accounts for only 60% of his cases, his results cannot be held as conclusive. It is true, too, that after five or six years many of the cases deemed cured by the removal of the focus of infection may have healed spontaneously.

W. LEHMAN, Hamburg—*Focal Infection*. This contributor to the subject of focal infection has worked along the lines of Rosenow. His research has covered the bacteriology of the granuloma, the proof of elective localization, and the clinical examination of sick people and therapeutic treatment. An exact knowledge of the entire bacterial flora of infected teeth is necessary to pin down definitely the ones deemed responsible for transmitting disease from the end of a tooth

to other parts of the body. In a case cited it was shown that bacteria found in the granuloma of an infected root-end and those in the blood stream of the same patient with an endocarditis were positively from different stems and entirely unrelated. In one of the clinics, as a matter of routine, a culture was made from infected root-ends and from the venous blood of the patient. In two cases it was readily demonstrated that the same bacteria cultured from the root-ends were to be found in the blood stream. It is therefore to be seen that the invasion of the blood stream from a source of infection at a root-end is possible.

All attempts to produce endocarditis in dogs from root-ends of infected teeth of persons known to have endocarditis failed in the hands of this investigator.

The author concludes that there is undoubtedly a relationship between infected teeth and systemic illness, but that it has been highly overrated. No definite conclusions can be drawn from the fact that, because a patient has an infected tooth and a systemic disease, a connection between the two must necessarily exist.—*Die Fortschritte der Zahnheilkunde*, August, 1930.

## DENTISTRY WHILE SEATED

By WILHELM BALTERS, Bonn, Germany

There are many reasons for the dentist to carry on his work at the chair while seated. Standing all day beside the patient is certain to tire the operator and prevent him from giving his best efforts to patients toward the end of

the day. At the present time almost all dentists work in a standing position, simply because it is a matter of custom. The author believes that a short trial will convince the dentist that excellent work can be done with much

more comfort while seated. It is also necessary to use a lower type of cabinet, so that instruments may be accessible without the dentist's having to rise.—*Die Fortschritte der Zahnheilkunde*, August, 1930.



# PRACTICAL HINTS

THIS DEPARTMENT IS NOW BEING CONDUCTED FROM THE OFFICE OF THE DENTAL DIGEST. TO AVOID UNNECESSARY DELAYS, HINTS, QUESTIONS AND ANSWERS SHOULD BE ADDRESSED TO EDITOR PRACTICAL HINTS, THE DENTAL DIGEST, 220 WEST 42D STREET, NEW YORK, N. Y.

NOTE—Mention of proprietary articles by name in the text pages of THE DENTAL DIGEST is contrary to the policy of the magazine. Contributions containing names of proprietary articles will be altered in accordance with this rule.

**WAX FOR REPAIR CASES.**—Take a hot spatula and draw it down the length of the sticky wax, which comes in sticks, deep enough to insert a piece of string. Insert the string, and seal it in with the wax similar to a candle. Christmas is not here yet, but light the candle and note how handy it is for uniting repair cases and saving time.

W. I. PRIME, Exeter, N. H.

## *Editor, Practical Hints:*

I am submitting to you the history of a case that has completely puzzled me. Any suggestion that you may make will be greatly appreciated.

The patient, a married woman, 55 years old, and apparently in good physical condition other than the oral trouble to be described, had worn full upper and lower dentures for twenty years with no trouble. She had the upper repaired in April, 1930, and shortly after the replacement the inflammation started. A few weeks later the lower had to be repaired and about that time the trouble reached its peak.

She came to me last week, after she had been checked over by a physician

and assured that her blood, kidneys, etc., were normal, so apparently the trouble is local rather than systemic.

The tip of the tongue is fiery red and burns, although it is not sore to the touch. The dorsal surface of the tongue has deep, craterlike fissures that show no inflammation nor pus. She suffers badly with extreme dryness of the mouth, which increases the burning sensation. She has not worn the plates for a month, but the symptoms still remain.

E. R. R.

**ANSWER.**—From a careful reading of your letter it would seem that the trouble with the tongue and the repair of the denture is only a coincidence, since there has been no improvement during the month that the dentures have not been worn.

Mead says, under the heading *Pernicious Anemia*:

"In all cases of sore tongue when local irritations and syphilis can be excluded, the possibility of pernicious anemia should be borne in mind. Even before the blood picture shows the characteristic changes, diagnostic symptoms occur on the tongue, such as



stinging, biting sensation usually along one side and radiating toward the lip."

It might be well to bring this to the attention of her physician.

We shall also be glad to publish your letter in the hope that some of our readers may be able to help you.

*Editor, Practical Hints:*

What is the history of broken needles, say, in the mandibular region? I am speaking of a sterile rustless-steel needle. What is the history of the result if it is left in the dense, immovable tissue of the jaw?

X.

ANSWER.—If a sterile needle point is buried in the dense bone of the mandible, there would be, probably, little danger of future trouble. If, however, a half-inch or so of needle is broken off in making a conduction injection, then every effort should be made to remove it as soon as possible. The movement of the jaw will cause the needle to move, and sometimes it travels for some distance with the danger of puncturing some tissue and causing trouble. It is not infrequent to find by taking x-rays one day and operating the next that the needle has moved out of the field, thus necessitating further incisions. It is always best to take x-rays immediately before operating.

From a legal point of view the patient should be told of the occurrence. The withholding of this information makes the dentist liable to serious charges, while, on the other hand, the breaking of a needle is not an uncommon occurrence and does not necessarily indicate carelessness on the part of the operator.

*Editor, Practical Hints:*

I should appreciate some information on the following case:

I have a patient, a girl, 12 years old, who has hypertrophy of the gums, anteriorly and on the left side, upper and lower, both labial and lingual. There are no mechanical irritations. She has very small (amalgam) fillings and no calculus.

G. I. B.

ANSWER.—A frequent cause of hypertrophy of the gum is traumatic occlusion. This should be carefully checked, not only in central occlusion but also during the lateral excursions of the jaw. It is taken for granted that Vincent's infection has been ruled out.

*Editor, Practical Hints:*

In regard to packing sockets after extraction, I should be pleased to have your opinion on the subject. Some pack all sockets, whether signs of abscessed condition are there or not; others pack none. If packed, what is the best material and method, and why?

H. C. R.

ANSWER.—As a general rule, it may be said that a socket should never be packed unless it is absolutely necessary. A blood clot is the best packing, since it not only protects the socket but forms the foundation of the healing process. The packing most commonly used is iodoform gauze. The most common mistake is in packing a socket too tight. This should never be done except in cases of hemorrhage.

*Editor, Practical Hints:*

Please suggest a simple method for

the construction of an all-porcelain detached crown with a cast gold base.

R. N. A.

ANSWER.—The circumference of the crown must be shaped to correspond with the circumference of the end of the root. The post, of such material as can be cast against, is fitted into the canal and cut off at the proper length. The crown and the end of the root are oiled, and casting wax is moulded around the post and end of the root. There should be an excess of wax. The crown is placed in position, making certain that the alignment is correct, and the whole is chilled. When the wax has hardened, the excess is trimmed off, the crown removed and the post and wax invested.

*Editor, Practical Hints:*

I am one of your readers and should like your advice on the following questions:

How can I help a patient of mine, a young lady, aged twenty-three, who is suffering from calcium deficiency?

Very few teeth in her mouth are left unfilled and new cavities seem to be forming. I have noticed a whitish discoloration on all upper anterior teeth, which is the forerunner of gingival caries.

Could you outline a course of treatment, giving a general diet? Also, what is the value of calcium lactate? Should I prescribe it, and how should it be given?

B. M.

ANSWER.—In cases of this character we believe that it is best to consult with her physician and, if he does not feel

able to carry on the case, to call in a specialist. The patient is probably receiving enough calcium, but for some reason or other is unable to utilize it, due, perhaps, to some disturbance in metabolism.

The question is so intricate that few if any dentists are capable of handling it, and it would seem as if the dentist had done his part when he had called to the notice of the physician the results of a very evident lack of calcium.

*Editor, Practical Hints:*

While sterilizing a cavity with phenol I touched the patient's lower lip with the phenol when removing it from the mouth. That was three weeks ago. It has left a dark-colored area on the lip.

I should like to know if that is characteristic of phenol, whether or not it can be removed, and the process.

M. P. R.

ANSWER.—When using phenol the antidote (alcohol) should always be at hand and ready for use. It is also advisable to use the rubber dam whenever possible.

The dark-colored area is characteristic and represents the destroyed tissue. It will disappear in time, and there is nothing that can be done except to avoid irritation as much as possible.

*Editor, Practical Hints:*

The results I have gotten from treatment of the following case have been very displeasing to me, and I shall greatly appreciate any information you can give me concerning the case.

Two months ago I began treatment of a case of gingivitis. The gums were

inflamed at the gingival margins with some hypertrophy, and bleeding was rather pronounced. Full mouth x-rays revealed destruction of bone in several interproximal spaces. I checked the mouth for occlusion and relieved the traumatic occlusion by grinding. I scaled and polished the teeth and treated with an astringent. This I used for several sittings, each time polishing the teeth with a rubber cup and pumice.

The bleeding and soreness left, but a reddened condition and slight hypertrophy remained. I discontinued the pyorrhea astringent and used a saturated solution of copper sulphate, but with no better results. I prescribed a mouthwash containing hydrogen peroxide 10 oz., wine of ipecac 6 drams, glycerin 10 drams, Fowler's solution 10 drams and distilled water. I advised also Charters' method of brushing the teeth, but the patient would not stay with it.

After following these two forms of treatment for some time, I dismissed the patient and instructed him to report to me within one month. He came to the office the first of this week, and the condition is just as it was when I dismissed him. There is no bleeding nor soreness, but the gums are an unnatural red at the cervical margins, and there is some hypertrophy. This condition is in the upper arch mostly. The lower gums are quite natural in appearance, except for a small area in the left central-to-cuspid region.

The patient has an end-to-end cross-bite in the anterior region. The left lower first molar is missing. The upper second bicuspid does not occlude and the first molar occludes slightly with the lower second molar. The gum con-

dition seems to be worse in the upper anterior region and in the upper bicuspid region on the left side.

J. H. G.

ANSWER.—It is very evident that the trouble has been checked, since the bleeding and pain have not returned. The remaining gingivitis may be due to, or at least be aggravated by, the malocclusion.

If it is not due to this, then thorough scaling, removal of dead tissue and the use of an oxidizing agent should be sufficient to clear up the case. In addition, it would be well to regulate the diet, have the patient eat plenty of fresh fruits and vegetables, cut down on meat and highly seasoned food, and give up smoking.

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*Editor, Practical Hints:*

I have had a peculiar condition of black deposits on the last two dentures that I have made, that is, on the artificial teeth. What causes these spots, and how can they be avoided?

A. G.

ANSWER.—Tartar, stains, etc., form on artificial teeth with the same ease as on the natural ones. In the two cases you mention there is probably a metabolic disturbance that accounts for the stain. It might be due also to the chewing of tobacco or something of a similar nature. An inquiry into the dietetic habits of the patient might show the cause.

---

*Editor, Practical Hints:*

A lady presents the following symptoms for diagnosis and treatment:

Neuralgic pains in the right mandibular region.

During the period of pain the tissues become greatly engorged with blood. There is a sensation of tingling and of blood-vessels ready to burst. The area of inflammation includes the buccal mucous membrane and at times appears on the outside of the cheek in the form of "little prickly pinhead bumps."

Brisk massaging with the finger induces bleeding of the mucous membrane, which, after a few minutes gives relief. As soon as the pain ceases, the tissues immediately resume their normal appearance. Conduction anesthesia also gives immediate relief.


This condition has been present with more or less severity for more than eight years and apparently grows worse. During this time the molars and one bicuspid have been extracted, and in all cases the healing has been slow and with symptoms very similar to "dry socket."

X-rays at different times and by different operators have revealed no abnormal conditions.


W. E. C.

ANSWER.—We shall be glad to publish your letter in THE DIGEST, in the hope that some of our readers may be able to assist you.





# CORRESPONDENCE



The following is a copy of a letter sent by William A. Lurie, M.D., of New Orleans, to S. M. Hart, D.D.S.

## A Possible Solution

DR. S. M. HART,  
8 South Main Street,  
Port Chester, N. Y.

Dear Doctor:

The dental roentgenogram of the lower left cuspid of your case as pictured in *THE DENTAL DIGEST* for October interests me, and I should like to know the ultimate diagnosis of the condition.

May I offer a possible solution?

The picture as presented seems to indicate that it was taken at quite an acute angle. Also I would feel that these teeth are irregular and crowded, and that the cuspid is out of the occlusal line, being inclined mesiolingually. If this is true, then I would take the shadow you refer to as being that portion of the tooth socket originally occupied by the tooth apex, but vacated and not obliterated when the tooth assumed its present position. I

believe I can make out a distinct lamina dura in your picture, which can be traced to the cuspid. If this is correct, your picture indicates no pathology associated with the tooth structure, and the tooth could retain its vitality, as you say. However, there is no way that I know of that one can be satisfied that this space is not one of necrosis, except by actual dissection, which may not be warranted.

I should like to see additional pictures taken from different angles, for I feel that a picture taken of this same tooth from a higher plane and focused more squarely onto the film will show but little disturbance.

May I hear from you on these points?

Cordially yours,

(Signed) WILLIAM A. LURIE, M.D.,

Suite 614 Maison Blanche Bldg.,  
New Orleans, La.



# DENTAL SECRETARIES and ASSISTANTS

## Secretaries' Questionnaire

All communications should be addressed to Elsie Pierce, care of  
THE DENTAL DIGEST, 220 West 42d Street, New York, N. Y.

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NOTE—HAVE YOU A BETTER WAY? HAVE YOU A TIME-SAVING SHORT-CUT? DO YOU KNOW A "STUNT" THAT LIGHTENS THE WORK OR MAKES FOR GREATER EFFICIENCY IN THE OFFICE? IF SO, WRITE TO ELSIE PIERCE. YOU MAY HELP MANY GIRLS WHO ARE BEGINNERS—AND YOU KNOW HOW YOU NEEDED HELP DURING YOUR FIRST FEW MONTHS IN A DENTAL OFFICE. PERHAPS YOU NEED HELP NOW. WRITE TO ELSIE PIERCE—SHE WILL HELP YOU.

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*Dear Miss Pierce:*

Will you please tell me whether it is usual for the assistant to supply her own uniforms, or does the dentist do so? Also, does he pay for the laundering of them?

C. E. W., Canada.

ANSWER.—A uniform is a personal garment just like any other dress. Wearing a uniform saves the wear and tear on the dress that it replaces. Uniforms must fit the person wearing them as perfectly as any other garment. With these facts in mind it would seem that the assistant should buy her uniforms. However, the question of finance enters into the proposition. Well-fitting uniforms of good material cost money, so it becomes practically impossible for an assistant on a small salary to purchase her uniforms. This leads to the practice of securing at a very small fee nondescript garments, very often aprons such as are worn by kitchen maids or elevator attendants,

from houses that supply such garment rather than the trim, well-made uniforms that an assistant should wear. It would seem good judgment on the part of the dentist, if he desires to have his assistant reflect the tone of his office, to purchase her uniforms, unless he is paying her a commensurate salary. We speak of this as we do because we know that many dentists do not pay their assistants salaries which warrant their buying their uniforms.

As far as the laundering of the uniforms is concerned, we believe that this should be paid for by the dentist. Upon circumstances will depend the number of uniforms used each week, but we advise that a soiled, rumpled uniform should never be worn.

Again may we say that there can be no arbitrary ruling advanced in this and other questions which depend upon the willingness or desire of individuals to do or not to do certain things. If the dentist for whom you work does not wish to buy your uniforms or pay for



their laundering, neither you nor I can force him to do so, no matter whether we consider it usual or not. Every assistant should have this detail arranged for when she agrees to take the position, as it is at that time that she must judge whether the compensation she will receive will warrant her buying her uniforms.

Dear Miss Pierce:

May I make a suggestion that will lighten the burden of those working for children. To my wife must go the credit for removing the terror of the drill from our office, for at her suggestion we now call the drill our "horse-race machine."

At some point on the engine belt we place a piece of cotton and on the opposite side a second piece. These are the white horses, and to the children they are starting off even. My assistant tells the child to watch the horses closely, because they will start to race as soon as I touch the button on the tooth. Away they go, and the faster the better. This device has saved hours of time and nerve strain.

May I close by thanking you for many valuable suggestions we are now using.

Dr. G. C. H., Toronto.

We deeply appreciate the Doctor's suggestion, which no doubt will be tried by many of our readers. We are glad that he has benefited by some of the suggestions in previous issues of the Questionnaire.

Dear Miss Pierce:

I should like to know whether there are any societies for dental assistants

on Staten Island. I have attended a few meetings of the New York society, but I find that the Academy of Medicine is too far away. Any information will be appreciated.

E. M. D., S. I.

ANSWER.—There is no society on Staten Island. The New York society is meeting just now at the Grand Central Palace (10th floor)—entrance on 47th Street, west of Lexington Avenue. Perhaps this will be more convenient for you. Why do you not organize a society on Staten Island?

Dear Miss Pierce:

Will you please inform me as to the necessary steps and the fee to become a member of the American Dental Assistants Association? I am not a graduate oral hygienist, but assist in a dental office. I should also like to receive a magazine pertaining to this subject.

L. L., Orange, N. J.

ANSWER.—If you will join the Dental Assistants Association of Northern New Jersey, you will automatically become a member of the national society, as the former association is affiliated with the national group. Get in touch with Mabel C. Clark, Secretary, 507 Orange Street, Newark, N. J., for information.

If what you desire is a magazine for dental hygienists, address *The Journal of the American Dental Hygienists Association*, 327 Towne Avenue, Los Angeles, Cal.

The dental assistants have a special issue of one of the dental magazines which contains several pages devoted

to their affairs. This goes to every member of the national association free each month.

*Dear Miss Pierce:*

Please print the proper way to mix cement for the setting of crowns and bridgework, etc.

I have gathered many fine ideas from the Questionnaire. You seem to know just how to solve our problems. May your pen never grow slack!

T. M., Tenn.

ANSWER.—First, the glass slab should be neither too hot nor too cold, not less than 65° nor more than 75° F. Secondly, mixing should be timed; not more than two minutes nor less than one and a half minutes should be consumed in mixing. The spatulation should be firm and even, so as to assure plasticity. When starting the mix, incorporate a small amount of powder into the liquid and gradually add the remainder needed, a little at a time. Divide the powder into four or five sections on the slab, until you have acquired the knack of mixing in the right proportions. Too much powder at the first contact with the liquid causes a too sudden reaction of the chemicals involved, which heats up the mix too much and thickens it too rapidly, preventing the right proportion of powder being added and thereby weakening the strength of the set. If the cement sets too fast, you have mixed too quickly or too thick or the slab was too warm. If the cement sets too slowly, you have mixed too slowly or too thinly or the slab was too cold. If the mix becomes hot and hurts the

patient, you have added too much powder to the liquid at the first and have not thoroughly spatulated the mix. If the mix is porous and does not hold, it has been poorly mixed from every angle. Great care is required for proper mixing of cements. It does not consist simply in dabbing some powder into so many drops of liquid; a chemical process is involved, requiring understanding and skill.

*Dear Miss Pierce:*

I have been a dental assistant just one month, and my whole heart and soul are in my work. We have a lovely office consisting of reception room, business office, two operating rooms, x-ray and sterilizing room and laboratory. The Doctor tells me that I have shown rapid advance in my work, and that the office has never been kept so clean. He has had three other assistants. He has started me with a salary of \$8.00 a week, and I doubt that he intends to increase it.

I keep the books, assist at the chair, develop x-rays, sterilize instruments and sharpen them, and do everything that I can to help him. What is the average salary paid a beginner? I know another assistant who does not do half of what I do and yet she is getting \$12.00 a week. Some one who knows the Doctor has told me that he never intends to pay an assistant more than \$9.00 a week. Do you think it would be fair for me to look for another position after I have had enough experience to apply? I want to be a good dental assistant, but I cannot afford to work for so little. I could get a position elsewhere for twice the money, but

I like the work very much and think that I can make good in time.

I want to join a dental assistants' society in my locality, and any helpful points regarding my work will be appreciated.

A NEW ENGLAND DENTAL  
ASSISTANT.

ANSWER.—We have answered this letter personally, but we should like the reaction of our readers. Not so long ago an assistant asked us why servants were better paid than dental assistants. We have to pay our scrub-women \$4.00 a day with carfare and lunch money in addition.

## Educational and Efficiency Society for Dental Assistants, First District, New York, Inc.

The activities of the Educational and Efficiency Society for Dental Assistants, New York, Inc., are now in full swing, having been resumed when a regular meeting was held on October 14, 1930. The program included the reading of a paper on *The Dental Assistant* by Rosemarie Cornelis, a member; the delegate's report of the American Dental Assistants Association Convention at Denver in July by Elizabeth V. Shoemaker, and a short talk on dental assistants' societies by Juliette A. Southard, Trustee for the Second District, American Dental Assistants Association. The Library was on exhibit, and many articles were borrowed by the members for home study. Sylvia Messinger, librarian, was in charge.

The director of classes has arranged a full plan of study and instruction for the members and expects to make this year's work unusual in its value and thoroughness. Classes in psychology, first aid, sterilization, physiology, dental anatomy, chair assistance, laboratory assistance and secretarial duties are planned, and registration is now open. Address Miss Mary O'Con-

nor, c/o Dr. Elias Reiner, Cliffside, N. J. The sessions are held in the evening, once each week, under the supervision of competent teachers. Members of the Society are welcome and may take the courses without charge.

The Clinic Club meets regularly on the third Monday evening of each month. Its purpose is to study dental assisting from many angles by means of practical demonstrations and table clinics. The programs include clinics by members and lectures by invited guests, who are authorities on the subjects they discuss. All members of the Educational and Efficiency Society for Dental Assistants, New York, Inc., are eligible for membership and are urged to take advantage of the educational opportunities offered by the Club. The President, Mrs. E. V. Shoemaker, Kew Plaza, Kew Gardens, L. I., will be glad to furnish further details. The next meeting of the Clinic Club will be held at the office of Dr. S. Eolis, Times Bldg., Times Square, New York, on Monday, November 17, 1930, at 7:30 p. m.

The Society meets regularly on the second Tuesday evening of each month, October to May, inclusive, at the Grand Central Palace (10th floor), 480 Lexington Avenue, New York. The time

of the next meeting is Tuesday, November 11, 1930, at 7:45 p. m. A cordial invitation to be present is extended to the members of the dental profession and to their assistants.

## Your Personality\*

By ANGIE RYAN, Chicago, Ill.

You are the master of your fate,  
You are the captain of your soul.

This spiritual quality of which I write is almost impossible to define. It is not necessarily a gift of tongue or perfection of features, but something that comes from within. Personality is individual. It may be the flash of a smile in one person, the friendly hand-clasp of another, and still in another it may be the twinkle of an eye. However, we do know that certain vital forces are essential in the moulding of a personality, such as cheerfulness, friendliness, faithfulness, kindness, unselfishness, tolerance, diplomacy, understanding, courage and persistence. These and lesser attributes too numerous to mention, bearing always in mind that it is a tremendously complex arrangement of a bewildering number of factors, plus a keen joy in living, plus the lending of an attentive ear to nature's wise counsel—these things are within *you* to be developed as time goes on.

If you wish to shape your personality, visualize the person you wish to be, your ideal of yourself. Use these qualities as a framework. Think of

yourself as a rough piece of fine metal that has to be shaped and polished before it can be used as intended. You have all heard the expression, "a diamond in the rough." How deceiving it looks! One would never recognize it as the same after it has come from the hands of the cutter and polisher. Looking into its brilliant depth, we wonder (or how many of us *do* wonder?) what it was like in the original state. And so it is with human beings.

Your first duty is to know yourself. Approaching the origin of your thoughts, you may find yourself groping in the dark. Turn the searchlight of your intelligence inward. You will observe that at times you are tempted to quit when some closed door baffles you. You may feel that the door has been locked against you and the key thrown away. But keep at it! Pains-taking search will in time open the door, perhaps, to unsuspecting sources of power and possibly to new opportunities to assert your self-knowledge in your daily affairs. Be on the alert for unsuspected powers! What must have been the amazement of Joseph Conrad when, after following the seas

\*Read before the American Dental Assistants Association, Denver, Colorado, July 22, 1930.

as a captain until well into his middle years, he found that he could write. He was so exhilarated that he elected to write in English, a tongue *alien* to him, and at his death, recently, he was acclaimed as one of the great masters of English prose.

No personality was ever more vividly portrayed to the American people than that of Charles A. Lindbergh. When he decided to be a flyer, he had no money, no experience, no job in his chosen line. The fact that he was listed at a well-known university as a failure did not worry him. His failure was in subjects foreign to his line, and he spent no time brooding over his inability to comply with school requirements made for average men. Freed of this obligation, he applied himself more diligently than ever to his chosen work. At the two flying schools which he attended he was rated as a hard worker. He rose inch by inch, plugging his way ahead of more brilliant but less conscientious students, never taking his eyes from his objective. But before he accomplished his historic feat he conquered himself. He went without food and sleep to make his brain more alert. He knew what he could do before he attempted the flight that made him famous.

In studying Lindbergh's personality we avoid vague dreams about repeating his achievement. We may not have his intense interest in flying, but we can cultivate the same degree of interest in our own work and prepare ourselves for any success that will come our way. Study the lives of great men who are familiar to you, in a general way. Some of the greatest figures in history were

men and women whose ugliness of face or body would have made them social outcasts had it not been for the living fire of something within them that we call "personality." They held the fate of nations in the hollow of their hands. Kingdoms fell and histories were *remade* by the force of their look or smile.

Vision Abraham Lincoln in the White House! The long body, muscles of steel, the hands roughened by the labor of a backwoodsman's life. He rose by struggle. He fought his way upward. How did he rise? He achieved greatness, just as many others whose names are familiar to you and me.

Think of Henry Ford, a Detroit power-house worker, at a salary of eleven dollars a week, working ten hours a day and yet finding time to put in a few hours each evening for three years on a wheezing, vibrating contraption that in due time worked a vast change in the social habits of the nation.

Edison was not much different until he began to wonder what was back of the electric impulses that flowed along the wires beside the railroad tracks.

Surely the study of one's own personality is worthy of some consideration. Find out more about yourself. Use psychology for the purpose of understanding yourself and human nature. Persist in self-examination. It is hope and faith that keep us striving. A new day and renewed zest make the power that drives us onward.

You will observe that all phases of your personality are undergoing almost daily changes—small, perhaps, but important. If you will harness your energy

and give it an opportunity to lead you into the realm of worth-while things, you will find the key to success, to a way of living and an ideal far beyond anything that you heretofore dreamed about. As your system acquires this new line of thinking, as you feel the value of this knowledge creeping into your being, allow your enthusiasm full rein. Let it take possession of you and you will find a new personality unfolding itself, coming into your life,

making you more valuable to your loved ones and yourself.

Edgar Guest, in a little poem whose last line I have changed, says:

*I never can hide myself from me;  
I see what others may never see;  
I know what others may never know;  
I have to live with myself, and so—  
Whatever happens, I want to be  
Able to bring out the best in me.*

25 East Washington Street





**STATEMENT OF THE OWNERSHIP, MANAGEMENT,  
CIRCULATION, ETC., REQUIRED BY THE ACT  
OF CONGRESS OF AUGUST 24, 1912.**

OF THE DENTAL DIGEST  
at New York, N. Y.  
State of New York, } ss.:  
County of New York, }

Published monthly  
for Oct. 1, 1930.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Seeley Vander Veer, who, having been duly sworn according to law, deposes and says that he is the Assistant Secretary of The Dentists' Supply Company of New York, Publishers of The Dental Digest, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

NAME OF	POST OFFICE ADDRESS
<i>Publisher, THE DENTISTS' SUPPLY CO. OF NEW YORK</i>	220 West 42nd St., New York, N. Y.
<i>Editor, GEORGE WOOD CLAPP</i>	New Rochelle, N. Y.
<i>Managing Editor, GEORGE WOOD CLAPP</i>	New Rochelle, N. Y.
<i>Business Manager, L. W. DUNHAM</i>	New Rochelle, N. Y.
2. That the owners are:	
THE DENTISTS' SUPPLY CO. OF NEW YORK	220 West 42nd St., New York, N. Y.
THE AMALGAMATED DENTAL COMPANY, LTD.	5-12 Broad Street, London, England
LEWIS L. FAWCETT	1347 Dean St., Brooklyn, N. Y.
LEROY FRANTZ	Davenport Neck, New Rochelle, N. Y.
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SADE E. L. OSBORNE	839 St. Marks Ave., Brooklyn, N. Y.
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GEORGE H. WHITELEY, Jr.	Boxhill, York, Pa.
J. OSBORNE WHITELEY	905 South Beaver St., York, Pa.
LILLIAN S. WHITELEY	905 South Beaver St., York, Pa.

THE AMALGAMATED DENTAL COMPANY, LTD., is a corporation organized under the laws of England, with an authorized capital stock of £2,850,000, ownership of which is scattered over a considerable part of Europe and includes a long list of names unknown to us, and probably a number of banks and other corporations.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

THE DENTISTS' SUPPLY COMPANY OF NEW YORK,

SEELEY VANDER VEER, Asst. Sec'y.

Sworn to and subscribed before me this 29th day of September, 1930.

[SEAL]

EMILIE S. SCHOPP

Notary Public, Westchester County

Certificate filed in New York County

Clerk's No. 991, Register's No. 1-S-687

My commission expires March 30, 1931.

# EXTRACTIONS

No Literature can have a long continuance if not diversified with humor—ADDISON

A model marriage is one in which the wife is a treasure and the husband is a treasury.

## MODERN MERCHANDISING

He entered the cigar store  
To buy himself a pipe,  
But bought a book, a sandwich,  
Some bric-a-brac and tripe!

(Wifey)—Hae ye seen me thimble, Angus?  
(Angus)—Aye. Ye'll find it wi' the whuskey bottle. I gied McWhister a nicht-cap last nicht.

## WHAT PUZZLED THE TRAMP

(Tatters)—Say, Rags, wouldn't it be great if cakes and pies grew on bushes?  
(Rags)—I dunno, I dunno. Who do ya tink would pick 'em fer us?

They say man is the highest form of animal life, but you never hear of an amoeba staying up in an elm tree for 500 hours on the chance of breaking into the papers.

## A SATISFACTORY TEST

A London chemist has been trying the effect of a new tonic on a mouse. He was more than satisfied when the little creature put its tongue out at the cat.

The melancholy days have come—for the married man. He is now worrying over the fact that he will soon have to wear the necktie his wife is sure to buy him for a Christmas present.

(Simkins)—I had an awful toothache yesterday, and I discovered a most astonishing cure. I went home, my wife kissed me, and instantly my toothache was gone.

(Friend)—Geehosifer, I've got a swell toothache myself. Say, Sim, do you think your wife is home right now?

A London dentist has a sign in front of his office which reads: "Teeth Extracted While You Wait." And still the M.D. chaps say that dentists are not progressive.

A farmer visiting his son at college was especially interested in the experiments of the chemical class. "We are at present endeavoring to discover or invent a universal solvent," said his son.

"What's that?"

"A liquid that will dissolve anything."

"That's a great idea," returned the farmer; then, scratching his head, he added, "but when you find it what are you going to keep it in?"

Not long ago a home meant something. It was the location of our birth. It was the place where we entertained our friends and where we held all our family functions. Today, we are born in hospitals, we entertain in our clubs, we eat in restaurants, we entertain our visiting friends in cabarets and are buried from funeral parlors.

(Farmer's Son)—Lissen, Pop, I want to take a bath. How about some warm water?

(Farmer)—What's that? A bath! Don't ye know this is only Tuesday?

(Son)—I want a bath!

(Farmer)—Well, by crackie, I don't know what our childer is comin' to nowadays.

Someone stole a doctor's Ford car that was parked in a side street. The doctor did not care to go to any great expense to recover it, but thought he would try a short ad in his morning paper, and inserted the following notice: "Lizzie, come home; all is forgiven."

## TURNING DOWN A NICE GIRL

Very daintily she tripped across the room. She looked strangely beautiful in the firelight with her slim girlish figure and her smooth golden hair.

I heard with a little stab of emotion the quick intake of breath when she saw me. I buried my head in my newspaper and pretended not to notice.

Thus I waited.

After what seemed an eternity I felt her soft arms seeking to encircle my neck.

Very firmly I put them away.

"No, Pamela," I said.

"Yes, yes," she pleaded, "yes."

She would have laid her head on my shoulder then if I had let her. She crept round behind me and tried to kiss the bald patch on the top of my head.

"Go away," I said.

There was an ominous sniff. Two big tears came into her eyes and rolled slowly down her cheeks.

"Please."

I hated myself for my brutality. It would have melted a heart of stone, I thought, to see how her shoulders shook convulsively as she flung herself in desperation on her knees.

"Won't you kiss me?" she asked at last, looking up at me piteously between her sobs.

"No, Pamela," I replied, sustained in my determination only by a high sense of duty, "no good-night kiss from Daddy for a little girl who refuses to let nurse wash her neck!"

# FUTURE EVENTS

THE UNION COUNTY DENTAL SOCIETY will hold its regular meeting at the Elizabeth Carteret Hotel, Elizabeth, N. J., on November 6, 1930, at 8:00 p. m.

Boyd Gardner, of the Mayo Clinic, Rochester, Minn., will speak on *The Present Day Relationship Between the Physician and Dentist*. Henry E. Hale, M.D., and William Dwight Tracy of New York will discuss the paper.

The Society extends a cordial invitation to attend to all members of the American Dental Association and their medical friends.

WILLIAM B. MARTIN, *Chairman*.

THE EASTERN DENTAL SOCIETY OF THE CITY OF NEW YORK will hold its next regular meeting at the Allied Dental Council Auditorium, 425 Lafayette Street, New York, on November 6, 1930.

Finn J. Bronner, Associate Professor of Operative Dentistry, New York University Dental School, will deliver a lecture on *Amalgam Technic*.

E. J. C. Smith will lead a Round Table Topic Discussion.

Preceding the lecture, at 7:30 p. m., a series of most instructive clinics on the newer phases of the amalgam technic will be given by the following clinicians:

Edmund Applebaum	Julius Korman
Bernard Clug	Benj. Kornfeld
Samuel Doskow	F. A. Stewart
S. Chas. Gardner	Harry Strusser
M. D. Knower	Geo. T. Tekulsky

LOUIS I. ABELSON, *Chairman of Executive Committee*,  
310 West 72nd Street, New York, N. Y.

## EXAMINATION FOR ENTRANCE INTO THE REGULAR CORPS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Examination of candidates for commission as Assistant Dental Surgeon in the Regular Corps of the U. S. Public Health Service will be held at Washington, D. C., on November 10, 1930.

Candidates must be twenty-three years and not over thirty-two years of age. They must have been graduated in dentistry at a reputable dental college and have had a total of seven years' educational training and practical experience. They must undergo a thorough physical examination and must satisfactorily pass oral, written and clinical tests before a board of officers.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

THE KINGS COUNTY DENTAL SOCIETY will hold its regular meeting at the Building of the Medical Society of the County of Kings, 1313 Bedford Avenue, Brooklyn, N. Y., on November 13, 1930, at 8:30 p. m.

Edwin N. Kent, D.M.D., Boston, Mass., Lecturer on Conduct of Practice, Harvard University Dental School, and Author of *The Business Side of Dentistry* and *Letters from a Self-Made Dentist to His Son*, will give a lecture on *Dentistry as a Business*.

The discussion will be opened by George Wood Clapp, D.D.S., New York, Editor, *THE DENTAL DIGEST*, and Author of *Profitable Practice*, *Brother Bill's Letters*, etc.

Preceding the meeting, at 7:30, the following will give clinics pertaining to the subject of economics:

S. Bass, D.D.S., Brooklyn, N. Y.  
S. J. Bregstein, D.D.S., Brooklyn, N. Y.  
Kings County Dental Assistant Secretarial Section.

J. L. FELSENFELD, *President*,  
H. AUSUBEL, *Chairman, Educational Committee*,  
1 DeKalb Avenue, Brooklyn, N. Y.

THE CONNECTICUT DENTAL COMMISSION will meet in Hartford, Conn., November 17-20, 1930, for the examination of applicants for license to practice dentistry and dental hygiene and to transact any other business proper to come before it.

Applications should be in the hands of the Recorder at least one week before the meeting. For application blanks and further information, apply to

ALMOND J. CUTTING, *Recorder*  
Southington, Conn.

THE ILLINOIS DEPARTMENT OF REGISTRATION AND EDUCATION will conduct examinations for registration to practice dentistry in Illinois on the following dates:

November 18-21, 1930, at the University of Illinois College of Dentistry, 1838 West Harrison Street, Chicago, Ill.

THE ODONTOLOGICAL SOCIETY OF WESTERN PENNSYLVANIA will hold a dental meeting at the William Penn Hotel, Pittsburgh, Pa., November 20-22, 1930.

H. D. Graham, President, announces that the Program Committee, of which G. W. Peiffer is chairman, has prepared a program which is both interesting and of high scientific value.

The essayists will be C. L. Drain, Associate Professor of Preventive Dentistry and Pedodontia, State University of Iowa, on *Dietary Control of Dental Caries*; George B. Winter, Professor of Exodontia, Washington University, St. Louis, on *Extraction*; S. Harold Supplee, New York, on *Denture Materials*; Mr. Krogg, Rochester, N. Y., on *Radiography*; and John G. Logan, Portage, Pa., on *Special Clinics*.

In addition to the essayists, elaborate educational sessions have been arranged for operative clinics, table demonstrations, topic discussions, etc.

There will be a large manufacturers' exhibit in the hotel during the meeting.

Suitable entertainment for ladies accompanying members will be arranged.

A cordial invitation is extended to all members of the American Dental Association.

THE SIXTH GREATER NEW YORK DECEMBER MEETING FOR BETTER DENTISTRY will be held at the Hotel Pennsylvania, New York, December 1-5, 1930.

As in former years, there will be scientific papers, lecture or teaching clinics, topic discussions, scientific section meetings and general clinics.

A special feature of this year's meeting will be one full afternoon devoted to the economic phase of dentistry. At this session efficient office conduct will be presented, also valuable information on wise and prudent methods of saving and investments for professional men.

All members of the American Dental Association are eligible to attend. The registration fee is the same as in former years.

A subscription blank and list of clinics will be ready for distribution about November 15th.

There will be a manufacturers' exhibit in the hotel during the entire meeting.

JOHN T. HANKS, *Chairman*,  
CHARLES M. MCNEELY, *Vice-Chairman*.

THE EASTERN DENTAL SOCIETY OF THE CITY OF NEW YORK will hold its regular meeting at the Allied Dental Council Auditorium, 425 Lafayette Street, New York, on December 11, 1930.

Clyde H. Schuyler will give a lecture on *Partial Denture Technic*.

Edward Kennedy will lead a Round Table Topic Discussion.

Preceding the lecture, beginning at 7:30, a series of most instructive clinics on the newer phases of partial denture construction will be given by the following clinicians:

Ferry Getz	Carl Lindberg
Amshel Gueft	G. B. Morris
Charles Kennedy	J. Selverstone
Howard T. Stewart	

LOUIS I. ABELSON, *Chairman of Executive Committee*,  
310 West 72nd Street, New York, N. Y.

THE MINNESOTA STATE BOARD OF DENTAL EXAMINERS will hold its next meeting at the College of Dentistry, University of Minnesota, Minneapolis, Minn., on December 12, 1930. Applications should be in the office of the Secretary by December 1st.

W. H. SMITH, *Secretary*,  
2337 Central Ave., Minneapolis, Minn.

THE BOARD OF DENTAL EXAMINERS OF CALIFORNIA will hold an examination in San Francisco for applicants to obtain a license to practice dentistry in California, beginning December 13, 1930.

Credentials must be in the office of the Secretary of the Board at least twenty days prior to the date above. For detailed information, apply to

BERT BOYD, D.D.S., *Secretary*,  
610 South Broadway,  
Los Angeles, Calif.

THE DENTAL PROTECTIVE ASSOCIATION OF THE UNITED STATES will hold its annual meeting at the Palmer House, State and Monroe Streets, Chicago, Ill., on December 15, 1930, at 4:00 p. m. sharp.

The reports of the officers will be given, a board of directors will be elected and such other business transacted as should come before the Association. All members are urgently requested to be present.

J. G. REID, *President*,  
D. M. GALLIE, *Vice-Pres. and Treas.*,  
E. W. ELLIOT, *Secretary*.

THE IOWA STATE BOARD OF DENTAL EXAMINERS will hold its next examination for applicants to practice dentistry at the State University of Iowa, College of Dentistry, Iowa City, Iowa, December 15-18, 1930.

Applications properly executed, together with college diploma and fee, must be filed with the State Department of Health at least fifteen days prior to the date of examination.

All applicants who take both theory and practical examinations must appear at the College at 9:00 a. m. on the first day of the examination, December 15th. Examinations in theory will begin at nine o'clock and continue until all have finished. Those taking the practical portion

of the examination only will appear at the College at 8:30 a. m. on the second day of the examination, December 16th, and may work on their set-up with those taking the theory portion, when those examinations have been completed. All set-ups must be in the hands of the Board on the evening of December 16th.

Work on gold foil, gold inlays and gold crowns may be started at 8:30 a. m. on December 17th. All demonstrations must be concluded by 6:00 p. m. on December 18th.

D. C. STEELSMITH, M.D.,  
Commissioner, Iowa State Department of  
Health,  
Des Moines, Iowa.

THE ALPHA OMEGA FRATERNITY will hold its annual convention at Hotel Statler, Detroit, Michigan, December 22-24, 1930.

Reservations should be made direct to the hotel.

By order of  
WILLIAM RICH, *Supreme Chancellor*,  
A. M. FLASCHNER, *Supreme Scribe*,  
419 Boylston Street, Boston, Mass.

THE SOUTHERN SOCIETY OF ORTHODONTISTS will hold its Eleventh Annual Meeting at the New Fleetwood Hotel, Miami Beach, Fla., January 13-15, 1931.

Among the essayists will be Alfred P. Rogers, Boston, Mass.; A. LeRoy Johnson, New York, N. Y.; Herbert A. Pullen, Buffalo, N. Y.; Frank M. Casto, Cleveland, Ohio, and W. W. McKibben, Miami, Fla.

An invitation to attend this meeting is extended to all members of the dental and medical professions.

CARLTON B. MOTT, *President*,  
Flatiron Bldg., Asheville, N. C.  
OREN A. OLIVER, *Sec'y-Treas.*,  
Medical Arts Bldg., Nashville, Tenn.

THE NORTH DAKOTA BOARD OF DENTAL EXAMINERS will hold its next meeting at the Gardner Hotel, Fargo, N. D., January 13-16, 1931.

All applications must be in the hands of the secretary by January 3rd.

GILBERT MOSKAU, *Secretary*,  
Grand Forks, N. D.

THE DELAWARE STATE BOARD OF DENTAL EXAMINERS will hold an examination for both dentists and oral hygienists in the Municipal Building, 10th and King Streets, Wilmington, Del., January 21-22, 1931, from 9 a. m. to 5 p. m.

All applications must be filed in the office of the secretary at least ten days before the date set for the examination. Full information, application blanks, etc., may be secured from

W. S. P. COMBS, *Secretary*,  
Middletown, Del.

THE CHICAGO DENTAL SOCIETY will hold its Sixty-seventh Annual Mid-Winter Meeting at the Stevens Hotel, Chicago, Ill., February 2-5, 1931.

Because of the great demand of previous years, the transactions of this meeting will be bound and made available to those who wish them.

The Program Committee, Stanley D. Tylman, Chairman, will present one of the best programs in the history of the Society.

The manufacturers' and dealers' exhibits will be in the exhibition hall of the hotel and will, as always, be a center of attraction. C. Davidson is chairman of this committee.

The Society extends a cordial invitation to attend to all members of the American Dental Association.

HARRIS W. McCLAIN, *President*,  
HOWARD C. MILLER, *Secretary*,  
55 East Washington Street, Chicago, Ill.

THE DALLAS MID-WINTER DENTAL CLINIC will be held in Dallas, Texas, February 16-18, 1931.

H. G. Morton of Milwaukee, Wis., will be the clinician in crown- and bridgework, and Arthur C. Engle of St. Louis, Mo., the clinician in surgery. The clinician for prosthetics is yet to be selected.

THE KINGS COUNTY DENTAL SOCIETY will hold its Second Mid-Year Meeting for Progressive Dentistry at the new St. George Hotel, Brooklyn, N. Y., February 25-28, 1931.

Elaborate educational sessions have been arranged for operative clinics, table demonstrations, lectures, topic discussions, etc. Other features are exhibits by manufacturers, dealers and laboratories; health demonstrations by the New York Department of Health and the New York Tuberculosis Association, and an art exhibit. There will be a banquet on Saturday, February 28th.

Admission will be by registration, no fee being required.

Watch these columns for further details.

JOSEPH NEMSER, *Chairman Publicity Committee*,  
62 Hanson Place, Brooklyn, N. Y.

THE MINNESOTA STATE DENTAL ASSOCIATION will hold its Forty-Eighth Annual Meeting in the Auditorium, Minneapolis, Minn., March 4-6, 1931.

Martin Dewey, President-elect of the American Dental Association, will be present.

One of the features of the meeting will be the clinical program, which will include a special section devoted to guest clinicians.

A cordial invitation is extended to all members of the American Dental Association.

GEO. D. ESTES, *Secretary*,  
911 Medical Arts Bldg., Minneapolis, Minn.



THE AMERICAN SOCIETY OF ORTHODONTISTS will hold its Thirtieth Annual Meeting at the Jefferson Hotel, St. Louis, Mo., April 21-24, 1931.

HARRY E. KELSEY, *President*,  
833 Park Avenue, Baltimore, Md.  
CLAUDE R. WOOD, *Secretary*,  
Medical Arts Bldg., Knoxville, Tenn.

THE VIRGINIA STATE DENTAL ASSOCIATION will hold its next meeting at the Chamberlin-Vanderbilt Hotel, Old Point Comfort, Virginia, May 11-13, 1931.

A. M. WASH, *Sec'y-Treas.*,  
504 Medical Arts Building,  
Richmond, Va.

THE DENTAL SOCIETY OF THE STATE OF NEW YORK will hold its Sixty-third Annual Meeting at Hotel Pennsylvania, New York, May 12-15, 1931.

A cordial invitation is extended to all dentists, members of the American Dental Association and to all ethical Canadian dentists.

John T. Hanks, 17 Park Avenue, New York, is Chairman of the Exhibits Committee. Address Dr. Hanks for information relative to space and terms.

Fred R. Adams, 8 West 40th St., New York, is Chairman of the Clinic Committee. Under his direction a new plan will be presented in the presentation of the Educational Clinics. Dr. Adams will be pleased to hear from ethical dentists willing to present clinics of merit.

For general information, address the Secretary.

ALFRED WALKER, *President*,  
100 West 59th St., New York, N. Y.  
A. P. BURKHART, *Secretary*,  
57 East Genesee St., Auburn, N. Y.

THE SECOND INTERNATIONAL ORTHODONTIC CONGRESS will be held at the Hotel Great Central, London, England, July 20-24, 1931.

A full and interesting program of papers and demonstrations is anticipated, and a museum is being organized. Suitable entertainment for ladies accompanying members will be arranged. Intending contributors to the activities of the Congress can obtain from the secretaries of their respective orthodontic or dental societies the conditions under which contributions are invited. The Secretary-General (A. C. Lockett, 75 Grosvenor Street, London, W.1) also will be happy to give information on request.

Information regarding traveling facilities and hotel accommodations may be obtained from the official agents to the Congress, Messrs. Morgan Pope & Co., of 7 St. James's Street, London, S.W.1; 6 Rue Caumartin, Paris; 71 Vanderbilt Avenue, New York; and Messrs. Noel Vester & Co. (Agents), 44 Unter den Linden, Berlin.

J. H. BABCOCK, *President-General*,  
G. NORTHCROFT, *Vice-President General*,  
E. D. BARROWS, *Treasurer-General*,  
A. C. LOCKETT, } *Secretaries-General*.  
B. M. STEPHENS, }





